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National Western Stock Show, Denver, Jan. 14—21

WESTERN Farm Life

Vol. XXIV *Denver, Colorado, January 1, 1922.* *Semi-Monthly*

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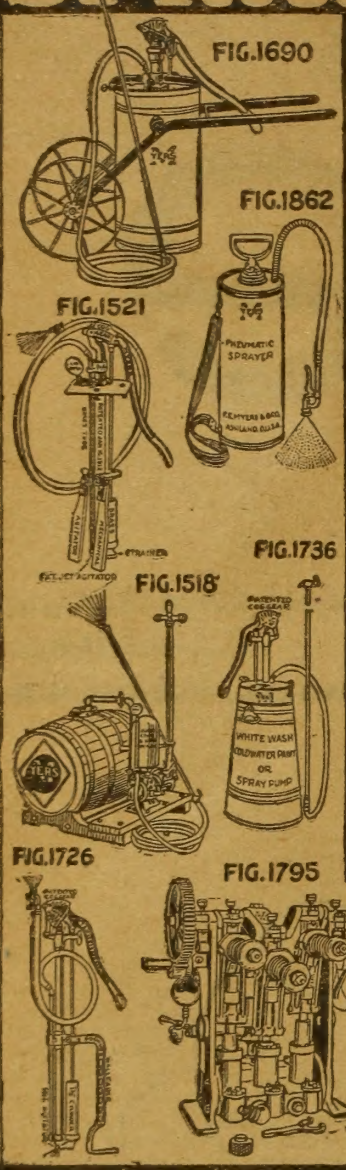

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Income Tax Law Changes.

Enactment of the new revenue legislation has brought to the offices of Collectors of Internal Revenue a flood of inquiries regarding various provisions. The Revenue Act of 1921 became effective November 23, 1921, "unless otherwise provided for."

To avoid error in preparation of their returns and later difficulties with the Bureau of Internal Revenue, taxpayers are advised to carefully note the changes and when they become effective.

The excess profits tax is repealed as of January 1, 1922. The rates for 1921 are unchanged.

The surtax rates for the calendar year 1921 are unchanged, and range from 1 per cent on the amount of net income between $5,000 and $6,000, to 65 per cent on the amount of net income in excess of $1,000,000. For the calendar year 1922 the surtax rates range from 1 per cent on the amount of net income between $6,000 and $10,000, to 50 per cent of the net income in excess of $200,000.

The exemption allowed for a dependent is increased from $200 to $400. Married persons living with husband or wife and heads of families are allowed a personal exemption of $2,500 (instead of $2,000), unless the net income is in excess of $5,000, in which case the personal exemption is only $2,000. The act provides that in no case shall the reduction of personal exemption from $2,500 to $2,000 operate to increase the tax which would be payable if the exemption were $2,500 by more than the amount of the net income in excess of $5,000. This is to overcome the disparity in the case of two taxpayers, one of whom is just within the lower $2,000 exemption and the other just within the higher $2,500 exemption.

Single persons and married persons not living with husband or wife, are allowed an exemption of $1,000. Nonresident aliens are allowed a single personal exemption of $1,000. Persons having gross incomes for 1921 of $5,000 or over are required to make a return, regardless of the amount of net income.

Provision is made for the repeal as January 1, 1922, of the tax on stockholders of a personal service corporation as such. After that date such corporations are to be taxed in the same manner as other corporations.

The income tax on corporations for the calendar year 1922 and thereafter is increased from 10 to 12½ per cent. The $2,000 exemption heretofore allowed corporations is to be granted only to those corporations whose net income is $25,000 or less.

Many persons are under the impression that the tax on ice cream, soft drinks, etc., monthly returns of which are required, have been repealed with the enactment of the new act. These taxes remain in force until the end of the calendar year 1921.

No change is made in the tax on admissions, except that after January 1, 1922, there will be no tax where admission is less than 10 cents. Effective January 1, 1922, the following taxes are to be abolished: On musical instruments, sporting goods, chewing gum, portable electric fans, thermos bottles, fur articles, pleasure boats and pleasure canoes, unless sold for more than $100, toilet articles, medicines and numerous articles of apparel.

On and after January 1, 1922, the tax on various works of art is reduced from 10 per cent to 5 per cent; the tax on candy from 5 per cent to 3 per cent, and the tax on carpets, rugs, trunks, valises, purses, fans, etc., from 10 per cent of sales price in excess of specified amounts to 5 per cent of sales price in excess of specified amounts.

The tax on parcel post packages is eliminated, effective January 1, 1922.

The new act provides that no taxpayer shall be subjected to unnecessary examinations or investigations, and only one inspection of his books of accounts shall be made for each taxable year unless the taxpayer requests otherwise, or the Commissioner notifies the taxpayer in writing that an additional inspection is necessary.

The period for filing returns on the calendar year basis is from January 1 to March 15, 1922. This year, as last, the tax may be paid in full at the time of filing the return or in four equal installments, due on or before March 15, June 15, September 15 and December 15.—F. W. Howbert, Collector of Internal Revenue, District of Colorado.

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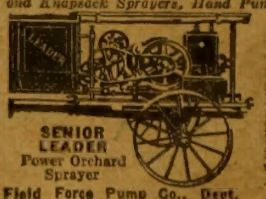

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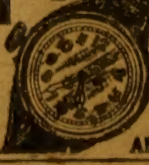

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Western Farm Life

A Western Magazine for Western Farmers and Stockmen

VOL. XXIV. DENVER, COLORADO, JANUARY 1, 1922. No. 1.

Sixteenth Annual National Western Stock Show

WEST'S GREAT ROUND-UP OF FARMERS AND STOCKMEN OPENS JAN. 14

H. W. HAILEY.

JUST a few short days now and the sixteenth annual National Western Stock Show will hold the center of interest for every red-blooded man and woman of the west. The farmer-stockman may be bent, but he is not broke. If he needs a little tonic to instill more life and pep into himself and the industry the remedy is at hand. It is the annual roundup of the builders of the west's great agricultural and livestock domain, to be held in Denver, January 14 to 21.

"What about the Stock Show this year?" has been asked by those on the outside. The answer is: The National Western Stock show is "carrying on" with faith and optimism for the present and the future. It is the farmer-stockman's convention, a breeders' institute, a pep factory, a clearing-house for millions of dollars' worth of livestock, and a roundup that brings together "the best in the West."

In every department of the show there will be a strong representation again this year. Some of the divisions are larger this year than ever before, others will hold their own as regards number of entries, while only one division, that of heavy draft horses, may be lighter than last year.

The Hereford show promises the greatest and most spirited contest for the coveted blues and purples that has ever been staged in the west. Many of the foremost herds of Colorado have been represented at the other big shows of the country during the past season and have returned to fight out the final battle of supremacy on the home grounds. The well rounded show herd of W. N. W. Blayney did itself proud on the Central Western state fair circuit last fall, and finished up a successful season at the International. The breeding herds of Dr. T. F. DeWitt of Denver, and J. D. Canary of Littleton were also well represented at the Royal and the International, while Geo. W. Baker of Littleton on his first visit to the International, made a very good winning.

The show herd from the Ken Caryl ranch of Littleton took in the Western Circuit and came home showered with ribbons and trophies that make them strong contenders for places well in the money at the National Western. Mousel Bros., of Cambridge, Neb., known wherever Herefords are raised, have entered their show herd at the National Western for the first time in three years. Numerous other western breeders, including L. C. Grant of Avondale, Colo.; Johnson Bros., and A. Christensen of Eagle, Colo.; A. J. Campion of Denver and Wellington; L. G. Davis of Saratoga, Wyo.; P. J. Sullivan of Wray and Denver, and Phillips Highland ranch of Littleton, will be on hand to give the judges the hardest work they have had for many a day.

The Shorthorn Division.

The Shorthorn show also promises to equal in numbers the 1921 show and in quality it will be another one of those championship affairs that will delight the eye of every lover of the reds, whites and roans. The herds of Maxwell-Miller of Littleton and the Allen Cattle Co. of Colorado Springs, have been to the International and returned with many honors. Then there are dozens of other real herds of Shorthorns in this and neighboring states that will be strongly represented in this great division of the show.

Colorado, as the home of Milking Shorthorns, has during the past year made a great name for itself. With five head entered in the International at Chicago, the Bonvue Farms Co., Denver, returned with three firsts, two thirds, one fourth, and senior and grand champion. Their International winners together with a full herd from the ranch at Golden, will be on hand at Denver. The Pine Valley Dairy & Farms Co. of Colorado Springs; J. B. Benedict of Littleton; W. C. Tegtmeyer & Son of Edgewater, and perhaps several other Western breeders of these popular dual purpose cattle will be on hand with full strings.

Big Holstein Show.

In the dairy division, the Holsteins, as usual, will claim the largest number of entries in what bids fair to be the greatest Holstein show ever held in the state, with the principal herds from the Arkansas valley, the Johnstown community, the Pikes Peak region, and other dairy sections strongly represented. The herd of the Modern Woodmen Sanatorium has been far afield during recent months with great success, and will be on hand at the National Western to claim its share of the premium money, against Colorado entries at previous shows and the state fair.

With interest in dairying and hog raising showing a most healthy rise in all sections of the state, hundreds of farmer-dairymen are expected to be on hand to refresh their ideas of type and production so necessary to success in this industry.

The hog show is going to be a winner as usual again this year with a strong list of entries. From the largest hog show ever held at the state fair, most of the prize winners there will come to Denver to again show their relative merit. Nebraska breeders, as usual, will be represented in the breeding classes, as will also the boys' and girls' clubs of the state.

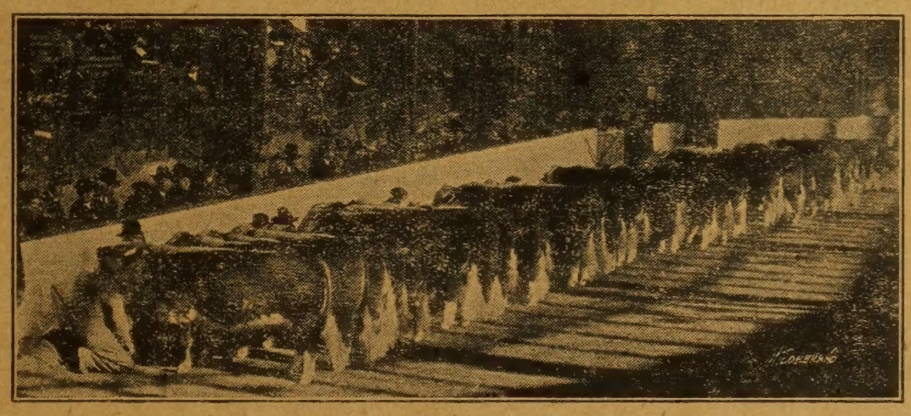
The poultry show will bring together the largest and best collection of birds ever shown in the state of Colorado. Six hundred additional pens have already been purchased to accommodate the entries and several hundred more will have to be secured before the big show opens. The entire third floor of the draft horse and industrial building will be given over to these feathered friends of the farmer's wife.

Carlot Feeder Cattle.

As usual, the big feature of the National Western that gives it a distinctive difference from every other show in the world is the division of feeder cattle in carload lots. This year, as never before, there is offered an opportunity for feeder buyers to purchase the cream of the west's production in this line at figures guaranteed to make money for buyers. Former experiences of selling a carload a minute will be outdone this year, according to Harry Youngerman, manager of the show, who reports the greatest pre-show interest in this division that has ever been known. Range and feed conditions have never been better than this year and hundreds of carloads of prime feeders will go milling through the ring in short order. Every day at the yards sees strong competition on the part of feeder buyers for the real good lots, and this demand will be intensified at stock show time, when local buyers find themselves in competition with the experienced feeders of the corn belt who flock to Denver each year.

With a fare and a half rate on all railroads in the western states, good returning from Denver until January 25, the attendance promises to be a record breaker this year. Similar stock shows on the Pacific Coast this year have reported record crowds due in no small part to the interest of all farmer-stockmen in better livestock.

Now is the time to begin packing the old traveling bag for a little journey into the land of good cheer and optimism. Ask your local railway agent for rates, get a neighbor boy to do the chores and bring the wife and kiddies to the first big roundup of the year, at Denver, January 14 to 21.



Scene in the judging arena of the National Western Stock Show.

State Farm Bureau After Ten Thousand Members

CAMPAIGN PLANNED AT ANNUAL SESSION HELD IN FORT COLLINS

ALVIN T. STEINEL.

PROGRESS in spite of depressed agricultural conditions was the outstanding feature developed at the annual meeting of the Colorado State Farm Bureau at Fort Collins, December 9 and 10, when officers made their reports for 1921. That progress was possible under the handicap of unsettled finances was the best indication of the fact that the Farm Bureau movement is bringing relief to agriculture and that it is based on sound economic principles and, therefore, able to withstand the test of hard times.

Accredited voting delegates were present from eighteen of the twenty-five organized farm bureau counties, roll call being answered by Adams, Arapahoe, Boulder, Douglas, Elbert, El Paso, Fremont, Huerfano, Kit Carson, La Plata, Larimer, Lincoln, Mesa, Montrose, Morgan, Otero, Saguache and Weld counties. Some counties had three or more representatives, but each was allowed but one voting delegate with the exception of Montrose, the only county in the state having a sufficient paid-up membership to be entitled to two votes. Mr. J. F. Kyle, the only delegate from Montrose, was therefore allowed two votes on every question.

Following so closely the session of the Colorado Farmers' Congress there was no program of addresses, but the entire two-day period was devoted to business. The most important action was the decision to conduct a state-wide membership campaign, beginning immediately after the first of the year, in order to bring Colorado's quota up to the percentage maintained by other western states. Ten thousand members is the goal.

The first step in this direction will be the training of organizers, which was put in charge of Mr. W. G. Jamison, and Mr. J. M. Rodgers, the former beginning his work in Pueblo, Huerfano and Douglas counties, and Mr. Rodgers in Boulder and Larimer counties. These two men are pioneers in farm bureau work and in close touch with the movement nationally, as well as in county and state. They will be able, therefore, to drill the organizers in the line of argument necessary to put the farm bureau idea up to the farmers effectively.

It was brought out again that the farm bureau is in no sense conflicting with or seeking to supplant any existing farm organization and that its chief mission is economic. It is a non-secret, non-political business organization and has been likened to the Chamber of Commerce or Commercial Club of the cities where business men from all lines of trade and industry assemble for united action on their larger problems. No social or fraternal organization can fill this field completely for all the farmers. Accomplishments at Washington in legislative matters, organization of the U. S. Grain Growers, Inc., the Livestock Marketing plan, freight rate reductions and negotiations for further reductions and other big things done are all proof of the usefulness of the farm bureau which will be presented to non-members in detail during the next few months through trained organizers. On this point the resolutions

(Turn to Page 16.)

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Fallowing for Winter Wheat Under Short Rainfall

OREGON EXPERIMENTS PROVE CORRECTNESS OF DRY FARMING PRACTICE.

E. R. PARSONS.

A BULLETIN on fallowing for winter wheat has just been issued by the State Agricultural College at Pullman, Washington, which is practically a report of fallowing experiments made at Moro in eastern Oregon. This part of Oregon does not have the Pacific Coast climate, but being east of the Cascade Range has much the same climatic conditions as western Idaho, Utah, etc., with perhaps less snow in winter than Colorado or New Mexico.

At the experiment station the average precipitation is 11 inches and a small fraction. It is much to the credit of this station that they can obtain 33 bushels of wheat per acre on such a small allowance of water and demonstrates what can be done by good plowing, fallowing and cultivation before planting.

The land for the summer fallow was plowed at different times in order to discover the best time for that operation. It was plowed in the early fall and also in the late fall to lie fallow a whole year; then a plowing was made April 1, May 1, and June 1. The results are shown in the following table:

TABLE I.—Four-year average yields of Turkey winter wheat grown on land summer fallowed by different methods at the Dry Farming Experiment Station at Moro, Ore., 1913 to 1916 inclusive.*

Time of Plowing	Methods of Cultivating the Summer Fallow. 1. No cultivation after plowing	2. One harrowing after plowing	3. Thorough cultivation after plowing	4. Left rough till spring. Thorough cultivation.
	Bushels per acre	Bushels per acre	Bushels per acre	Bushels per acre
April 1	25.6	30.2	33.5	
May 1	25.3	27.4	27.2	
June 1	21.8	22.3	21.0	
Early fall, dry				29.2
Late fall				25.0

*Both Tables compiled from Washington Experiment Station Bulletin No. 146.

Dry Plowing Pays.

In this table perhaps the most interesting point to note is that dry plowing in the fall outyielded late fall plowing when the land was in better condition for working. Many farmers are much against dry plowing at any time, but we have often observed that dry plowing is much better than no plowing and there is often a chance to reduce the clods and fine down the surface before planting time arrives, especially on land that is to be fallowed and can be cultivated before the crop is put in. This report also stresses the fact that the early plowed summer fallow produces more crop than the late; there being a steady decrease each month from April 1 to June 1. The April plowed land outyielded the June by twelve bushels on the plots which were thoroughly cultivated and kept clean of weeds throughout the summer months.

It will be noted that the results tabulated are the average of four years' careful work and experimentation. A single year's experiment is in no way conclusive except to give a clue as to what may be expected, but when the same results are obtained year after year for three or four or five years we know that we have obtained a lead which it is perfectly safe to follow.

On our ranch in Colorado we obtained practically the same results and the best crops of Turkey Red that we ever raised were planted on summer fallowed land plowed in March or April; but here also is another point perhaps worth considering. When the land needed building up we would sometimes wait until there was a deep carpet of weeds some six or eight inches high, usually in the month of June, and plow them under green for the benefit of the soil; but we never expected to get as much off this plowing as from the early, and we seldom did, and this is one of the reasons that we have always consistently recommended early plowing.

We might also remark that early planting in August or the first week in September goes very well with early plowing. In the Rocky Mountain states there is nearly always a rain in the fall which will germinate winter wheat. Sometimes this occurs the last of August or the first week in September, and sometimes in October, when it turns into soft snows. It is a good idea to be ready for this rain whenever it comes, for if the wheat is put in deep, about three inches, there is no danger of it drying out and it is a great benefit to the crop if it can cover the ground before the winds start, or the zero weather begins.

Fallowing for wheat and other grain has been the rule in California, Oregon, Utah and other states for many years and is responsible for the high yields which prevail there.

A California Experience.

One of the largest crops raised in the dry districts of California was by an enterprising farmer of Dixon, Solano county, Mr. J. Ahern, who thought he would try what two years of summer fallowing would bring in the way of a dry-farm crop. On a 38-acre field he raised 41 sacks of barley weighing 110 pounds each per acre. This is the more remarkable because the moisture in the fallow has to be carried through a dry the loss of soil moisture during this season of about five months. What is period? The fallow is plowed deep as soon as the rains commence and from a precipitation of twelve or fourteen inches, eight inches are often conserved for the future crop.

This eight inches of water will be almost entirely in the top four feet, each foot containing about two inches at the beginning of the dry season. The top foot, of course, commences to dry out even when cultivated and the loss at the end of five months' drouth will be approximately about one inch and a half. The second foot will probably loose about one inch and the third half an inch, the fourth losing nothing worth mentioning. Thus the total loss will be something like three inches, five remaining in the subsoil. The deeper the moisture the less loss by evaporation, and since the roots of small grain will follow it down from 4 to 7 feet there is no question but what they can use it.

Those whose experience in farming has been concerned chiefly with the top foot of soil have an idea that nearly all the moisture is lost to the crop when the surface is dry down to half a foot or so; but this is not the case. If the subsoil holds plenty of conserved moisture almost any good rain will wet up the top and start the crop.

Fertility and Soil Moisture.

Another part of this Washington state bulletin relates some interesting experiments to determine the relation of fertility to soil moisture.

TABLE II.—Relation of the strength of the nutrient solution to the water requirement of and the growth made by wheat plants when grown in a pure quartz soil.*

Strength of the nutrient solution in per cent.	Pounds of water required to produce 1 pound of dry matter, stem and leaves only.	Pounds of stem and leaves produced with different strengths of nutrient solutions.
.0125	1074	3.27
.0166	848	4.20
.0333	700	10.55
.0500	492	23.00
.0666	446	26.56
.1000	316	66.44

Speaking broadly this table shows that in a rich soil where the soil solution is strong only half the water is required to make a crop as compared to a poor soil with a weak soil solution. We might, therefore, almost say with truth that fertilization is irrigation. The water used by a plant is mainly a carrier to supply the mineral matter from the soil which is left in the sap while the surplus water is transpired into the atmosphere through the pores in the leaves. Therefore, it stands to reason that when the water carries a heavy load much less of it is required to do the job than where it carries a light one. The relation of the soil solution to plant growth is a most interesting subject and we propose to take this matter up in another issue.

Dr. Cooke Was Right.

The fertility of soils depends on many different factors, some of which are not generally understood. Some fifteen years ago at one of the Dry Farm Congress conventions our Dr. Vernon T. Cooke offered an opinion that as a general rule our dry farm soils would average higher in fertility than the washed-out soils of the East. The Doctor was quite right; but it was not till lately that this fact is becoming generally recognized.

Under a precipitation of about 14 inches the water seldom penetrates the prairie sod more than about two feet, so that it is impossible for the top fertility and humus extracts to get beyond the reach of the roots of all ordinary crops. In the east with a precipitation of 30 or 40 inches the water may wash out the surface and sinking down lose all the fertility in gravel or sandy subsoils 10, 20 or 30 feet below and out of reach of everything but tree roots.

The popular opinion with regard to dry places and deserts is that the soil is no good because nothing much seems to be growing there; but we know nothing about what a desert will grow until we put water on it. Another theory is that the soil should never be exposed to the rays of the sun but kept covered as much as possible. This is also fallacious. What happens on sun-burnt soil is this: The heat and dryness stops all fermentation and bacterial action. During the period of slight precipitation there is some growth of vegetation which afterwards dries up, leaving a little more humus to accumulate, and mix with the sand every year. This action which has been going on perhaps for thousands of years naturally amounts to something, and, if we except certain sand blown localities, the deserts are rich. The deserts of Utah are more fertile than much of the more eastern plains country. The Imperial Valley of California is one of the richest of the world, originally a desert. The Mojave desert is now being irrigated and opened up to settlement and is also proving wonderfully fertile. The Libyan desert of Egypt also turned out to be rich soil as soon as irrigating water was turned on it. The deserts of China are in the same class; all that they seem to need is water. Thus we find that the dry lands all over the world are good. There is no acidity for the farmer to fight which so often prevails in the soils of the bottom lands of wet countries.

Tired Mother Gets More Advice on Hospitality

A MAN, TOO, LOST FAITH IN STORY OF THE GOOD SAMARITAN

Here are some more interesting letters commenting on what Tired Mother had to say in a recent issue, on the subject of rural hospitality, its use and abuse. The letter which leads sets one to thinking and wondering if, after all, we are grateful for the ability to dispense hospitality. Those of us who have never had to worry about where the next meal was coming from and who have never labored under the burden of sickness, sorrow and death, will find our sympathy going out to the lady in Nebraska who, in spite of troubles, has not lost her faith in Divine Providence or human nature.—E. R. R.

* * *

In Hard Luck, But Game.

Dear Tired Mother—I am 22 years old, live in a sod house here in Nebraska, and have seen hard times myself, but the Lord says, "Ask, and it shall be given you; seek and ye shall find, knock and it shall be opened to you, For everyone that asketh receiveth, and he that seeketh findeth, And to him that knocketh it shall be opened. For what man is there, of you, whom if his son ask for bread, will give him a stone?" No, sister, I don't belivee that the Bible says to take it out of your children's mouth for strangers. If the Bible says for you to, please show me. I have read it some and haven't found where it compels a person to. And Sister, I've had all kinds of trouble, enough the past year to make any ordinary lady insane, but I braced up and lived through it all. It first began with my dear, kind, loving husband who had the rheumatism for four long months. He was in bed over six weeks, flat on his back, and I had two little children, one 3 years and the other 2 years old, and then I was teaching school to make ends meet. I had to wash, iron and bake nights, then get up before 5 in order to get my housework done and feed my husband, dress him and fix things so he could have a pail of water to drink and wood by him so he and the children could keep the fire going. I was going to school one morning when the horse fell with me and hurt my knee cap. The doctor had to fix it up and told me not to step on my foot for over a week anyway. But there were my two sweet children and no one to care for them only mother, so I braced up and stood up to it and got over that just when school was out. Then I took sick and was abed for two weeks. I was up for only a month when our only dear little boy got hold of the fly poison. He is not here to caress any more, and I never will have my poor little dear to put to bed as many a night I rocked him to sleep.

When you look about you, sister, there are others who go through just as hard times as I have, whose hearts ache with grief and pain, but don't you think mine does to? We have over $500 worth of doctor bills to pay for just this year's sickness. Then a grocery bill for three months $25, etc. I worry, too, but with God's hand to guide, and He knows best, He will help me through. My husband never worked a bit this summer or last fall. His right hand is crippled. He never will straighten his fingers out, I don't believe. Oh, sister, if I could only see you and talk face to face, I know you'd feel better. You are down-hearted and discouraged. Your heart aches for pleasure. I hope, dear, you will do as you think best. But you surely have a good husband, have you not, dear sister? Oh, thank God if you do! He can take you on his lap, caress you to his breast and talk, which will help you, my dear. I must say cheer up, a better day for all by and by. As ever a friend if you care for advice.—Subscriber, Nebraska.

* * *

Hot Shot From a Man.

Is Tired Mother right? I'll say she is, for, as she says, many a time she has gone without her desert. My people moved to western Nebraska in the early days when ranches were few and far between and the Indians roamed freely over the country. My father, too, was like "Tired Mother." He fed everybody that came along and for years our family never ate a meal alone, and when they were well filled up they went their way. Some said thank you, and some not even that. Now, after long years, I can look back and see the tired look on my mother's face and tired expression on dad's face when he would come in and say, "May, there is two fellows out here that want dinner," and in those days the most of the early settlers were hard up and lots of times we didn't have anything but corn bread and milk to eat. But dad was always ready to share

(Turn to Page 10.)

Rural Problems Discussed by Noted Authorities

COLORADO FARMERS' CONGRESS HOLDS A SUCCESSFUL SESSION

THE Colorado Farmers' Congress, which is the open forum for agriculture, held its most successful session in the twelve years of its existence at Fort Collins, December 6 to 9. Nationally renowned speakers discussed agricultural problems, including such topics as transportation, finances and legislation. One of the outstanding features of the program was the address of United States Senator W. S. Kenyon of Iowa, on the Agrarian Bloc of the U. S. Congress. Senator Kenyon handled this subject without gloves, defending the action of congressmen and senators in grouping themselves for the purpose of furthering the interests of rural legislation at Washington.

A notable event of the congress was the receipt of a personal message of greeting and encouragement directly from the President of the United States. It was the first time in the history of any agricultural gathering in this state that such recognition has been given Colorado farmers. The message of Mr. Harding appears in another column of the present issue.

The list of speakers included Governor Oliver H. Shoup, ex-Governor Herbert S. Hadley of Missouri, now on the faculty of Colorado University; ex-Governor George Carlson, Albert A. Reed, the Denver banker; Floyd N. Wilson, representing the Federal Land Bank; Prof. L. A. Moorhouse, head of the Department of Economics and Sociology of the Agricultural College; W. F. Allewelt, director of the Colorado Division of Marketing; Lewis Tobin, secretary of the Colorado Transportation Commission; J. F. Kyle, Montrose; O. T. Reedy, Senior Assistant Engineer of the Colorado State Highway Department; Mary C. C. Bradford, former State Superintendent of Public Instruction; Chauncey Bell of Greeley.

These and many others appeared on the program of the Colorado Farmers' Congress, following which there was a session of the State Rural Life Conference and the annual meeting of the Colorado State Farm Bureau. The week was crowded with discussions and addresses of great importance to agriculture and the attendance was all that could have been desired, delegates being present from practically every agricultural county in the state.

The congress showed its appreciation of the splendid and unselfish efforts of Newton C. Dougherty, for the betterment of agriculture by re-electing him president with a unanimous vote. Mr. Dougherty is largely responsible for the development of the open forum idea carried out in the annual meetings of the Colorado Farmers' Congress, where questions of import to the farmers may be discussed from every possible angle. The various subjects covered in addresses and discussions were acted upon by the resolutions committee, a summarized report of which follows:

A Message from Harding.

President Harding honored the Colorado Farmers' Congress, held at Fort Collins early in December, with a special message which carried a word of cheer and encouragement directly from the White House to our farmers. It was through the personal acquaintance of President Newton C. Dougherty with the Nation's chief executive that this distinction was accorded the Farmers' Congress. Delegates and visitors in attendance from all parts of the state were appreciative of the compliment, expressing themselves as highly pleased with the President's statements concerning the agricultural outlook and his approval of the recommendations contained in the annual report of the Secretary of Agriculture. Mr. Harding's message follows:

My Dear Mr. Dougherty—Just a word to express the hope that you will have a large attendance at the Colorado Farmers' Congress, and that much good may come from your meeting. I want you to know that I fully appreciate the difficulties under which the farmers of the country have been laboring this year. This of course is largely due to the economic disturbance following the world war, and we cannot hope to overcome that all at once. Here in Washington, however, all of us have been seeking for ways to alleviate these troubles, and I think it is generally agreed that we have done some good, and if we have not done more, it is not lack of trying.

I think I have never seen a time when the people in official life here, both in congress and in the administrative departments, have more earnestly tried to bring about readjustments that would improve agricultural conditions. In this connection I cannot refrain from referring to the annual reports of the secretary of agriculture, which have been on my desk two or three days, and which seem to me to present a particularly able and constructive view of the problem and the possible measures of amelioration.

I feel that Secretary Wallace has presented this matter particularly well, and I want you to know that his proposals have met the heartiest concurrence. I feel that we have reached the turn of the road, and while we cannot hope for spectacular improvements, I think there is good reason to look for gradual improvement from this time forward.

The farmers of the nation have carried on under trying conditions in a manner that is beyond my capacity for praise. Please express to those in attendance at the congress my very best wishes. Most sincerely,

WARREN G. HARDING.

The Resolutions.

A resolution deploring the conditions which will obtain on the Western Slope in the event of the junking of the Moffat road and imploring the State Utilities Commission and our courts to give a just consideration to the rights of the thousands of people, citizens of Colorado, who have followed and even preceded the railroad into northwestern Colorado.

A resolution declaring that the farmers of this state are heartily in favor of and praying for the success of the disarmament conference.

A resolution urging the adoption of a state graduated income tax law and the revision of the present inheritance tax schedule.

A resolution calling for the abolition of the issuance of tax-exempt bonds by state and national governments.

A resolution vigorously opposing the proposed transfer of the Forest Service from the U. S. Department of Agriculture to the Department of the Interior.

A resolution urging Colorado farmers and bankers to study and co-operate in getting advances and benefits of the War Finance Corporation funds.

A resolution vigorously opposing the transfer of the Bureau of Markets from the U. S. Department of Agriculture to the Department of Commerce, as is being proposed.

A resolution petitioning the State Board of Agriculture to do everything possible to demonstrate the advantages of co-operative marketing, especially for farmers.

A resolution favoring the development of state coal lands and the use of such coal by state institutions as an economy measure.

A resolution commending the twenty or more members of the state legislature for attending the sessions of the congress.

A resolution commending and endorsing the Near East relief and its project to get 35 carloads of grain in the state.

A pledge of the support of the farmers of the state to the State Board of Agriculture and a very favorable commendation of the work of the board and the college during the past year.

List of Officers.

In addition to the re-election of President Dougherty, already mentioned, other officers chosen were: Dr. I. L. Gotthelf, Saguache, first vice president; W. T. Lambert, Sedalia, second vice president; Roud McCann, Director of Extension of the College, secretary-treasurer. Executive Committee: Denver District—J. P. McInroy, Castle Rock; Plains District—E. J. Leonard, Fort Morgan; Northern District—E. R. Bliss, Greeley; Western District—F. S. Carmen, Grand Junction; Southwest District—David Halls, Durango; San Luis District—C. E. Wilson, Villa Grove; Northwest District—P. S. Elting, Hot Sulphur Springs; Arkansas District—John C. Vroman, Jr., Manzanola.

An hour of the congress was set aside for a memorial service in honor of the late W. R. Callicotte, who spent a lifetime in furthering rural development, especially along legislative lines. Mr. Callicotte was a member of the legislative committee of the Colorado Farmers' Congress for years. He was killed last winter in an automobile accident during the session of the Colorado legislature. Among those asked to pay tribute to his memory were J. A. Golden of Longmont, President Dougherty of the congress, Dr. Lory and others.

Space limitations make it impossible to publish adequate extracts of the many good addresses, but these may be had by farmers if the plan of publishing the proceedings is followed out. Much of the information given by the various speakers, notably that relating to national agricultural legislation given by Senator Kenyon, should be in the hands of every farmer. Senator Kenyon comes by his leadership of the agricultural bloc in the upper house honestly, having been born and reared on a farm in Iowa and having made a lifelong study of rural problems. He made it clear to his audience at Fort Collins that the farmers are not seeking special favors at the hands of Congress, but legislation safeguarding the welfare of the nation through proper fostering of the fundamental industry. Opposition to the farmers from various other groups and so-called blocs at Washington is seeking to throw discredit upon the efforts of the farmers to obtain fair treatment.

At the rural life conference which opened the evening of December 8 with a banquet, interest centered around the talks given by Dr. George Von Tungeln, head of the Department of Rural Sociology at Iowa Agricultural College, whose philosophical dissection of rural social problems was alive with helpful suggestions to the workers in attendance, whether engaged in college or church activities. Other splendid addresses were by Rev. Clark Bower, Clifton, Colo., on "The Country Man and the Country Church"; Prof. L. A. Morehouse, "Rural Life in Retrospect and Prospect"; Mrs. C. E. Roe, State Secretary P. T. A., "The Service of Parent Teachers' Associations in Rural Communities"; Prof. B. F. Coen, "Some Rural Conditions in Colorado."

Cabbage Growers Win Fight Against Middlemen

FARMERS STICK TO CO-OP. IN SPITE OF BRIBERY AND COERCION

W. C. HOOD, Jr.

Here is a remarkable account of the fight of a group of farmers against unfair market practices, carried on in the Platte valley of Colorado in the cabbage growing district centering at Brighton. Growers organized under the Colorado co-operative law which legalizes non-profit organizations of producers in the handling of their own product on a strictly co-operative basis, have come through the shipping season of 1921 with colors flying. The story herewith published is a history of the year's operations of this organization, during which the organized cabbage shippers exerted every unfair means at command and resorted to every trick that could be devised, including bribery, to wreck the producers' organization. The story is vividly told by W. C. Hood, Jr., the manager.

FOR the season just past the Colorado Cabbage Exchange handled a trifle more than half the total Colorado cabbage crop. Growers received from the sales through their Exchange $289,447.96. The average price received by growers for cabbage was a shade over $20 a ton, a price only surpassed in two war years, 1916 and 1918.

In addition, Exchange growers cleaned up their fields of both early and late cabbage, a condition seldom realized in past years. Everything was sold. Cabbage unfit for market was sold to kraut factories. A high standard of grading was maintained, loading methods improved, and a hearty, generous response from the trade attested the improved quality of Colorado shipments.

Exchange growers and members will review these facts with pride. Their organization has come through its first season with a clean record and not only survived, but prospered, in the face of powerful, organized opposition working for its destruction.

The achievement is not that of any individual, but the result of the combined efforts of three hundred and fifty loyal farmers co-operating for the common good of all.

To assemble and put in operation the machinery to load and sell a thousand odd cars of cabbage is in itself a considerable undertaking. Added to this, Exchange farmers had to meet and overcome three forms of attack:

1st. The old, established shippers offered the growers more than their cabbage was worth.

2nd. What cabbage they were able to buy they constantly quoted and sold at less than the Exchange selling price.

3rd. They deliberately glutted the market in order to cause the Exchange financial loss.

With the war over, for this season at least, we expect to discuss these matters with an entire absence of bitterness. It is as well to recognize in the beginning that the shippers have their side of the argument. It is beyond human nature that they would not do anything in their power to destroy a co-operative marketing association.

The success of co-operative marketing marks the passing of speculative shippers. To look a little way into the future, five years from now independent shippers will still exist, but they will be insignificant in comparison with their past importance because the great bulk of most Colorado farm products will be sold by the farmers themselves through their own organizations.

All Colorado shippers know this. They are more familiar than are farmers with the remarkable development of co-operative marketing in California. And in fighting the Exchange, they are simply fighting to retain the business that they consider theirs.

From this viewpoint we can recall the campaign against us with more charity and less blame, but with a no less strong determination to win against such attacks in the future.

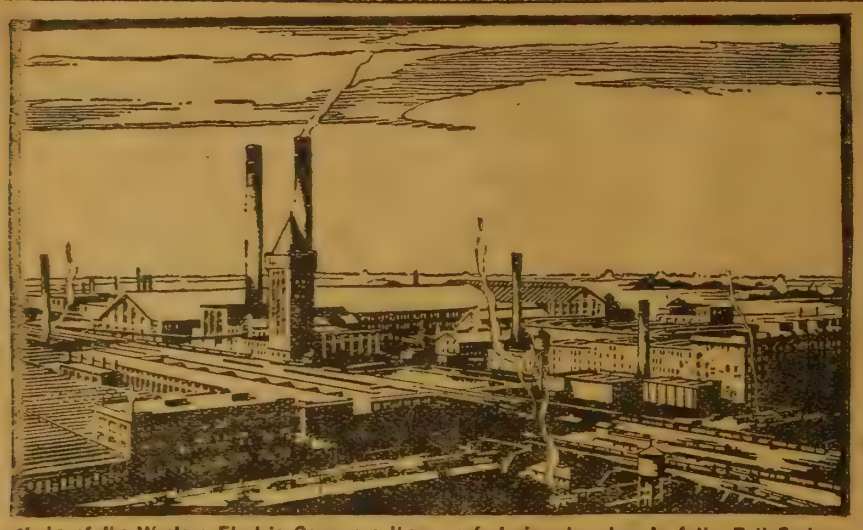
1st. Before the shipping season started, a majority of northern Colorado growers had signed contracts agreeing to sell their cabbage exclusively through their own organization.

To combat the farmers' organization, the more important shippers combined their forces and formed what was known to the trade throughout the season as the Colorado Shippers' Combine. They contributed to a common pool a sum of money, variously estimated, but generally accepted around the produce houses in Denver as $20,000. With this fund, backed by their wide shipping experience, and financial and mental resources, they fully expected to disrupt the Exchange and bankrupt it financially before the season was well under way.

The first plan of attack, and persisted in throughout the season, was to offer the growers from 10 to 25 cents more than the Exchange price to get them to break their contracts. It was bribery money pure and simple. Some growers did sell their honor for that additional $5 a ton. Most of them, by far the great majority, did not.

Though it failed in its original purpose of buying the growers, this was good though expensive propaganda for the shippers, and they used it throughout the season. In this way they at-

(Turn to Page 7.)



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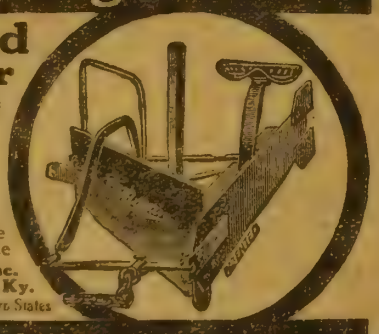

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High Freight Rates Impose Grievous Burden on Farmers.

Picking up an agricultural state, transporting it physically one to three hundred miles from its natural market and setting it down again, a physical impossibiliey, of course, is accomplished in economical effect, says the Secretary of Agriculture in his annual report, by "the simple process of marking up the transportation cost a few cents per hundred pounds." The effect of high freight rates on the farmers of the country during the past year or more of radical downward readjustment of farm produce prices is thus outlined by the Secretary, who describes the situation more in detail as follows:

"The cost of getting farm products from the farm to the consumer's table has increased tremendously during the past three years. The freight charge is very nearly doubled, and in some cases more than doubled. When wheat was selling at $2.50 per bushel, corn at $1.75, cattle and hogs at $16 to $22 per hundred, cotton at 30 cents per pound, the increased freight rate was not a serious matter. It amounted to but few cents relatively and was a small item in the total price. But with wheat at $1, corn at 48 cents, cattle and hogs at $7 to $10 per hundred, cotton at 17 to 20 cents (all these being primary market prices, not farm prices), the addition of even 10 cents per bushel or per hundred pounds imposes a burden grievous to be borne. When farm prices are ruinously low, any addition to the freight charge means added distress. At the present time the cost of getting some farm products to market is greater than the amount the farmer himself receives in net return. And the heaviest freight burden naturally falls on those farmers who live in our great surplus-producing states.

"Not only do the very large advances in freight rates impose a heavy burden on the producers of grain and livestock, cotton, and wool, but on the growers of vegetables and fruits as well. Indeed, some of the latter have been compelled to see their products waste in the fields because the prices offered at the consuming markets were not large enough to pay the cost of packing and transportation.

"This transportation matter is one of vital importance to agriculture. The country has been developed on the low long haul. Land values, crops, and farming practices in general have been adjusted to this development. Large advances in freight rates, therefore, while bearable in a time of high prices, if continued, are bound to involve a remaking of our agricultural map. The simple process of marking up the transportation cost a few cents per hundred pounds has the same effect on a surplus-producing state as picking it up and setting it down 100 to 300 miles farther from market. Agriculture is depressed until the rates are lowered or until population and industry shift to meet this new condition. Any marked change in long-established freight rates, therefore, means a rearrangement of production in many sections and for a time at least favors some areas at the expense of others.

"More than this, in as much as our heavy consuming population is massed so largely near the eastern coast and our surplus is produced long distances in the interior, substantial advances in transportation costs have the effect of imposing a differential against our own producers in favor of their competitors in foreign lands, especially to the south of us, who have the benefit of cheap water transportation, and who, in many cases, can lay down their products on our eastern coast more cheaply than our own people can ship their products to the same points by rail.

"Rail transportation is essential to our agricultural production. Good rail service is of tremendous importance. Our farmers realize that our railroads can not be maintained and operated efficiently unless permitted to charge rates which will cover all fair operating costs, maintain their roadbeds and equipment, and pay a fair rate on the money invested. No one has a greater interest than the farmer in efficient transportation. At the same time, the economic aspects of material changes in railroad rates must be considered more carefully than in the past. If these changes are made without due consideration of their effect on agricultural production, inevitably they will create profound disturbance and impose great injustice."

Arthur Brisbane says that we should not practice thrift so that we will not go to the poorhouse, but to increase our earning power by making our saved-up money work for us.

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Cost of Growing Corn
Figured at 62c a Bushel.

Based on the state average of nearly 31 bushels per acre, the cost of producing a bushel of corn in Missouri this year was 62 cents. With corn selling at less than half that figure, it is not surprising that farmers are using corn for fuel. Costs in Missouri will not differ much from those incurred in the same farming operations in the western states, where corn is an incidental and not the main crop. The figures are based on a large number of reports from farmers who worked them out in co-operation with the Missouri College of Agriculture. The summary, made by O. R. Johnson and B. H. Frame of the college, is as follows:

Cutting stalks—1.24 man hours at 23c; 2.38 horse hours at 9.6c; equipment charge at 5c	$ 0.633
Breaking ground—2.9 man hours at 23c; 9.52 horse hours at 9.6c; equipment charge at 5c	2.057
Disking, harrowing, dragging, etc.—2.47 man hours at 23c; 7.87 horse hours at 9.6c; equipment charge at 5c	1.717
Planting—1.106 man hours at 23c; 2.10 horse hours at 9.6c; equipment charge at 5c	0.550
Seed—7.7 pounds at $1.875 per bushel	0.258
Cost of putting in crop	5.215
Harrowing corn—1.49 man hours at 23c; 3.68 horse hours at 9.6c; equipment charge at 5c	0.380
Cultivating corn—3.99 man hours at 23c; 8.26 horse hours at 9.6c; equipment charge at 5c	2.124
Cutting weeds and miscellaneous labor—2.43 man hours at 23c	0.559
Cost of cultivating crop	3.563
Harvesting—Man labor at 4.42c per bushel; 8.87 horse hours at 9.6c; equipment charge at 5c	2.654
Total operating cost per acre	$11.432
Rent on land at 2-5 of crop	7.621
Total cost per acre	$19.053
Cost per bushel at farm (yield 30.75 bushels as reported by E. A. Logan, Bureau of Crop Estimates in October, 1921)	$ 0.62

Cabbage Growers Win Fight Against Middlemen

(Continued from Page 5.)

tempted to persuade the growers that their sales organization was not getting them as much as it should for their cabbage, and so create dissatisfaction. Some growers will say even today that they stuck to the Exchange at a sacrifice.

What did they sacrifice? Did they not receive a very high average price in a year when all other farm products were at a discount?

Yes, but the shippers were paying a still higher price. Was it not a sacrifice to refuse the higher price?

No, that was not a sacrifice. Men do not hold it to be a sacrifice to be honest in the face of temptation.

Selling for Less.

2nd. Although paying more for cabbage at home, most of the time the shippers were quoting less than the Exchange selling price. This was done to get business and hamper the Exchange on the selling markets. There were instances where the shippers were actually selling for less abroad than they were paying at home.

One broker put it very well in a letter dated November 18, 1921, as follows:

"We did practically no business for you last season. The trouble was competition constantly shaded prices. By this we mean that good shippers did the cutting. * * * So far as next season is concerned we hope this cut-throat competition will be eliminated. * * *"

After the big cut in August, when the shippers glutted every market in the country, price cutting was mostly 10 to 15 cents under the Exchange price for the purpose of getting orders away from the Exchange and not, as was the August cut, for the purpose of destroying the market.

Glutting the Markets.

3rd. Glutting the Markets to Cause the Exchange Financial Loss: For two weeks prior to August 9, the Exchange was selling its cabbage for $40 a ton, netting the growers $35. The demand was very strong and jobbers were booking orders as far as a week in advance so as to be sure of getting shipments. This is the highest price ever received by Colorado growers for so long a period. It was apparent that the price would hold through August and clean up the early crop.

This would, of course, have been a wonderful showing for the Exchange. The shippers were bidding $5 a ton more than the Exchange and getting very little cabbage. They did everything in their power to compel the Exchange to increase its selling price to $45 a ton, at the same time advertising to the trade that the Exchange was a farmers' trust that was putting the price of cabbage so high that no one could buy it.

We do not know that it has ever happened before that a farmers' organization has held down the price of its own product in the face of wide-spread demand to increase it.

It was necessary to do this. The purpose of the shippers in trying to compel an increase in price was clearly to tie up the movement and at the same time discredit the Exchange with the trade.

These attacks having failed, the shippers played their high card, which was intended to break the Exchange financially.

The cabbage that they had shipped from the beginning of the season was not sold, but accumulated at terminals and diversion points waiting for the time to strike. That time came August 9. With some hundred or more accumulated cars they glutted every market taking Colorado cabbage. They cut the price by leaps and bounds until in a few days the selling price, instead of $2, was 75c, and no takers.

It was supposed that the Exchange would suffer such a tremendous loss that it could not meet its obligation to the growers to obtain for them $1.75 for nearly 150 cars shipped but not yet delivered.

The Exchange actually did lose almost $15,000 on account of this break and the uncertain conditions that followed. From these figures, which have never been made public, the shippers may find consolation for their own heavy losses.

We passed this crisis, met our obligations before due, and thereafter the fight was a milder affair. Price cutting continued to the end of the season on a more conservative scale, overbidding at home to cause the growers to be dissatisfied with the Exchange price continued, but the big battle was fought and won in August.

Price Cut Cost Growers $100,000.

It is conservative to say that the August price cut cost the cabbage growers of northern Colorado at least $100,000.

The shippers admit that they deliberately broke the market. For the period between August 15 and September 1, the growers received 60 cents for their cabbage instead of $1.75. For the period between September 1 and 15, they received 70 cents instead of $1.50. There was no other reason for these lower prices than the destruction of the markets beginning August 9.

There are a few poor, misguided growers who were dissatisfied with the low prices and seemed to hold their own organization responsible.

With this as an excuse, they broke their contracts with the Exchange and sold thereafter to the shippers.

I have thought of them sometimes as the farmer who decided to sell his own hay. He had ten stacks in the field. The hay buyer who had always before sold the farmer's hay for him was very angry. He came to the field at night and set fire to five stacks in revenge. The next morning the unfortunate farmer hurried to the hay buyer and said: "You have burned five of my stacks; please sell the other five for me. I do not know enough to sell my own hay."

Next Year.

In reviewing the season's operations, I have touched on the more dramatic side. The success of the Exchange is so evident and the fight by which that success was won is still at the front of our minds. It has been a real fight. We give our opponents full credit for adopting tactics that were hardest to meet, and which at one time almost destroyed us.

It would be impossible to fight any kind of battle without both sides receiving some wounds. Our wounds are represented by money losses and our very few dissatisfied growers. When one considers that the shippers were endeavoring throughout the whole season to cause our growers to be dissatisfied, and spent many thousand dollars to that end, it is strange they succeeded so little.

Next year we may look for better things. By now the shippers must be convinced that they cannot destroy us. They will doubtless work in harmony.

We must continue to follow constructive lines. It is necessary that we have still stricter grading rules, so that Colorado cabbage may be the standard of the markets; that we improve loading methods still more, so that the cabbage that growers have given so much labor will not be damaged in loading into cars. These things of themselves will widen our markets and increase demand, but in addition the sales department must increase its connections and get into closer personal touch with the trade.

Why Does the Mule Kick?

Probably because his owner doesn't use a tractor!

Lower Machine Prices
—a factor in a brighter outlook for 1922

MOST of the readers of this paper know that we have reduced our prices on farm machines for 1922. The lower figures apply on practically our entire line of grain, hay, and corn harvesting machines, plows, tillage implements, seeding machines, etc.

Reductions in prices of farm machines and other articles the farmer buys is one of the many indications pointing to continued improvement in the farmer's situation. The War Finance Corporation is steadily pouring aid from its billion dollar fund into agricultural communities to finance the farmer. Freight rate reductions on stock, grain, hay, etc., now going into effect, will save many millions for the farmers. Land values are now on a sounder basis. For 1922, better labor at lower cost will be available, better marketing conditions are being evolved, and recent tariff legislation also should tend to increase farm product prices.

All these factors indicate that more efficient production by modern methods and improved machines will mean greater profit for the new year. You cannot afford to postpone the purchase of needed machines. Where repairs have been made again and again, beyond the point of serviceability, waste and loss are pretty sure to follow. The present prices will enable you to replace the old with efficient modern machines so that best use may be made of the opportunities that are certain to come to the farming world.

The International Harvester Line of Farm Operating Equipment

Binders	Corn Binders	Spring-Tooth Harrows
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Push Binders	Huskers and Shredders	Culti-Packers
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Rakes	Beet Seeders	Tractors
Tedders	Beet Cultivators	Motor Trucks
Loaders	Beet Pullers	Cream Separators
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Combined Side Rake and Tedder	Lime Sowers	Feed Grinders
Baling Presses	Broadcast Seeders	Stone Burr Mills
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Listers	Horse Plows	Potato Diggers
Corn Cultivators	Disk Harrows	Wagons

If you are interested in learning some of the new prices or in looking over any individual machine, the International Dealer in your vicinity is at your service. Or you may address your inquiry direct to us.

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The Agricultural Bloc.

United States Senator Kenyon of Iowa told the Colorado Farmers' Congress something about agricultural blocs. It seems that a bloc, as applied to a group of senators or congressmen interested in any particular line of legislation, was devised as a term of derision, but, as sometimes happens, the gentlemen with the misguided sense of humor who thought they were bringing discredit upon the farmers, have learned that the agricultural bloc is anything but a joke. Neither is it a grouping of legislators for unfair purposes.

As a matter of fact, it is a development that favors the people, because the grouping of legislators along economic instead of party lines, is a healthful indication. It shows that down at Washington there is a realization of the fact that agriculture must receive the consideration that the basic industry deserves. Senators and congressmen who meet informally to discuss legislation and who at times act in concert setting aside party lines, are seldom mistaken about any measure they may favor, because they work in the open. The bloc system, if it is a system, has something to recommend it over the old method of taking orders from an invisible boss.

The New York World recently made interesting comment on this subject, indicating a tendency even on the part of the metropolitan press toward more consideration for agrarian measures. Says the World:

> Whether the farmers have been badly treated or not, they think they have been badly treated, and nobody has been able to convince them to the contrary. They know that their war profits were mostly paper profits and that they were remorselessly liquidated in a single crop. They know that they are still compelled to sell their crops at cost or less than cost, and they have no intention of assuming any tax burdens that they can saddle on the East. This may be what Mr. Kahn calls "narrow-visioned obliquity," but the louder Wall Street squeals the more lustily the great heart of the American farmer sings for joy. This may be poor economics but it's intensely human. The West and the South are coming into a closer communion of interests every year. [illegible] sectionalism, but it is sectionalism that the East cannot overturn by harsh words and angry protests. It must either take its medicine or make an intelligent effort to understand the problems of the rest of the country. Agricultural America is lined up against industrial and financial America in reconstruction legislation, and Wall Street is just beginning to understand what has happened.

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Forestry and Agriculture.

The West is vitally interested in keeping the Forest Service under the jurisdiction of the Department of Agriculture, because preservation of our forests, reforestation and watershed protection are solely and exclusively agricultural problems. This is so evident that one might wonder why anyone should even suggest a change, yet there is open and active propaganda on the part of the Secretary of the Interior to assume control of the Forest Service by moving it bodily over to the Interior Department.

Mention has already been made in these columns of Secretary Fall's ideas on conservation. There is nothing underhanded or secret about the effort he is making, consequently the friends of conservation have come out in the open with opposition to the proposal. Leaving out of consideration all political phases of the question and looking at it only from the farmers' angle, we fail to see how Congress can follow Secretary Fall's suggestions. If timber is not an agricultural resource, what is it? If the water supply of the western half of the continent is not an agricultural resource—the lifeblood of farming—what is it? And if the Department of Agriculture is not created for the supervision and administration of agricultural resources what excuse has it for existence? It seems such an obvious thing to keep our forests from ruthless destruction and exploitation, save them and replenish them for the sake of our food supply that we can find no argument for Secretary Fall's proposal, except that he wants jurisdiction of the forests. We hope Congress will be kind to the Interior Department and give Secretary Fall all the help he may need to make his administration of public lands a success. There is plenty to do in that line, without seeking to infringe upon the rights and duties of other branches of government. Secretary of Agriculture Wallace in his annual report summarizes the matter very effectively in the following paragraph:

"In perfecting plans for controlling an insect infestation on forest lands under its jurisdiction, the Department of the Interior has recently found it advisable to agree that the work should be handled by the Forest Service, working in co-operation with the Bureau of Entomology. The Bureau of Soils assists the Forest Service in the studies of soils and their bearing on the life of forest trees and forage plants, and further, in land classification for agricultural homestead settlement. The Bureau of Crop Estimates secures information on the needs of stockmen and farmers for public and national forest ranges, which aids the national forest administration, and collects also data on the products of farm woodlots, which is of value in the development of farm forestry. In short, having largely exhausted the forest crop grown in advance, the problem now is to use more widely what remains and to grow other crops to meet our needs. That is to say, forestry is a distinctly agricultural business. * * * Finally, the agricultural industry itself is the largest owner of timberlands and the largest user of forest products and as such is vitally interested in the administration of the forests."

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Farm Bureau Doesn't Conflict.

That the farm bureau is not in conflict with any other farm organization was reiterated in the resolutions adopted at the recent convention of the state organization. It has been necessary from time to time to make plain the fact that the farm bureau is a unique movement; that its field is cut out for it along economic lines and that it does not aim to create close social or fraternal association among its membership, but confines itself to the handling of the farmers' business problems. Other farm organizations have felt that the farm bureau might be trying to duplicate established work, but a moment's reflection will show that this is not the case.

Social and fraternal organizations, especially those having secret rituals, necessarily are limited in their appeal to people of unified thought. Such organizations fill their field well and they are constantly extending their usefulness to the groups that favor their ideas and ideals. But outside of social contacts, or religious, ethical and political influence there is among rural people a solidarity of interests that is fundamental. We may designate this as the "bread and butter" interest, or the business tie. It is the same interest or desire that leads town business men to get together in commercial organizations and chambers of commerce, for the protection and development of trade and industry.

Why should not the farmer, therefore, have an organization that looks after his material welfare? He need not expect to progress along ethical or spiritual lines if he neglects the material side of his business and he has been neglecting it, for hitherto all organized effort in behalf of the farmer economically has been spasmodic, or in favor of a small group. Not until the American Farm Bureau Federation came into being was rural America provided with a voice capable of making itself heard nationally. It is no reflection on any existing farm organization that the farm bureau is growing rapidly because it is performing a necessary service to agriculture and the time has arrived for its full development.

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They Do Make Sorghum.

Who said Colorado farmers do not make sorghum for table use? The editor said it, because he thought sorghum making was confined to the cotton country, where he used to watch the mills press the sweetness out of sorghum cane—the sweetness that made hot biscuits and flapjacks more palatable and slippery. So in answer to a subscriber's question the editor said that cane grown in Colorado is used principally for feed and that it does not usually reach the required degree of juiciness and sweetness for making sorghum. He knows better now, because he has heard from the country. Kiowa county has come forward with the names of several good farmers who raise cane and convert it into sorghum. Two of these farmers removed all doubt of their word by sending sample bottles of sweetenin' which have been tried and found highly satisfactory.

Nor is Kiowa county the only locality where they make sorghum. Here's a letter from County Agent G. G. Clark of Montezuma county, down in the southwest, which informs us that J. T. Gilliland of Ackmen made about 35 gallons of the best sorghum 'lasses the county agent ever tasted, and that it retailed for $1.50 a gallon. Now if anyone else wants to know whether Colorado farmers make sorghum, the editor will say: "I'll say they do!"

From Lida K. Link of Eads came a sample with the following apt verse:

"In Kiowa county this sorghum was made,
From choice silver top sugar cane;
And its flavor will ne'er from your memory fade,
"If to eat it on corn cakes you only will deign."

Then there is a most interesting letter from Mrs. Howard R. Sunday, also of Eads, who has something to say about Kiowa county sorghum, as follows:

Editor, Western Farm Life—In the December 1 issue I noticed the inquiry from a Pitkin county subscriber regarding the making of sorghum in Colorado, and I wish to say that at different times for many years persons have made sorghum in Kiowa county, Colo., but owing to the poor equipment they had, they only made for their own use and perhaps a few gallons over.

During the last three or four years two men have been making it with success. R. B. Amyx, Eads, Colo., has made for three and perhaps four years, growing this cane without irrigation; I do not know the kind; and C. J. Rose, also of Eads, has been making for two years. This year he made 300 gallons from three acres of cane grown without irrigation; he had the Silver-top cane, I think.

I have never used any of the sorghum made by Mr. Amyx, but I am told it is very good. They both find a ready market for their sorghum at $1.15 per gallon. I am told that the cane does not contain so much juice here as in other states, but is very rich in sugar and that it is very easy to make 75 to 100 gallons of sorghum from an acre of cane. I understand that there has been sorghum made in Baca county, but to what extent and the grade I do not know.—Mrs. Howard R. Sunday.

From W. H. Skinner, Superintendent of Schools at Towner, comes the following list of farmers making sorghum: Rolla Amyx, Eads; Clem M. Rose, Eads; Frank Phillips, Sheridan Lake; Ira McLean, Holly.

News of the Farm Bureaus

A Call for Loyalty.—The first official act of Charles E. Gunnels in his new capacity as Director of Organization of the American Farm Bureau Federation was to issue the following statement: "Never before in the history of civilization has agriculture been in such a precarious condition. The only hope lies in co-operation and united effort among farmers. The courageous farmer joins his Farm Bureau in order to fight shoulder to shoulder with his fellows. The man who wavers or shirks now is a coward. In the Farm Bureau army there is no room for the man who cannot carry his own pack. The march is long, the time is short; there must be no hesitation. Let us be courageous and laugh to scorn the proposal that now is the time to reduce our Farm Bureau membership fee. It is the same as proposing, when the fight is hottest, that the ammunition supply be reduced by half. He who would enjoy the fruits of prosperity must be willing to pay the cost. A Farm Bureau membership is the Liberty Bond of agriculture. Let us remain steadfast."

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Endorsed by Harding.—In his message to the Congress, President Harding reiterates the administration's strong endorsement of the co-operative marketing program which has been vitalized and developed by the American Farm Bureau Federation. The President said: "Something more than tariff protection is required by American agriculture. To the farm has come the earlier and heavier burdens of readjustment. There is actual depression in our agricultural industry while agricultural prosperity is absolutely essential to the general prosperity of the country. There must be some economic solution for the excessive variation in returns for production."

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To Standardize Machinery.—A committee of four on standardization of farm machinery is to be appointed by the American Farm Bureau Federation. The appointment of the committee was requested by a conference in the general offices on December 2. In addition to the Farm Bureau, the National Association of Farm Equipment Manufacturers, the National Implement and Vehicle Dealers' Association and the American Asociation of Agricultural Engineers had representatives at the conference. The committee was instructed to work out a program of development for standardizing farm machinery and to report a larger meeting of all groups interested in effecting standardization savings of farm implements costs.

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Montrose County Meeting.—At one of the largest and most enthusiastic gatherings of practical farmers ever held in the city, the Montrose County Farm Bureau, at its annual meeting held at the Moose hall yesterday, elected officers for the ensuing year, endorsed the effort being made for a postponement of the opening of the project, listened to the reports of the officers for the year, enjoyed a fine lunch together, and had a good time generally. The meeting was called to order shortly after 10 o'clock in the morning by President R. L. Loesch, who declared that it was not well for the farmers to spend too much time in holding a post-mortem of the past year, but it is time for them to take an extra hitch in their belts and plan for the coming year. The report of Secretary Wilcox showed 394 members who had paid the $3 membership fee; 55 who had paid the $2 fee; one who had paid $1.50, and 82 who had not yet paid anything, making a total membership of 431. The financial report showed receipts of $1,112.51, and expenditures of $1,110.46, with a balance of $1.05. Officers were elected, as follows: President, C. C. Rolfe; first vice president, Gene Stone; secretary-treasurer, Harry Monell; superintendent of clubs, J. J. Tobin; pests, L. E. Ross; freight rates, J. F. Kyle; livestock, T. C. Anderson; roads, Thos. Lytle; marketing, Clint Atkins; crop improvement, O. W. Lemmon; editorial, R. L. Loesch.—From the Montrose Enterprise.

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Club Work Prospers.—A tentative national organization of boys and girls' clubs was effected during the International Livestock exposition by the most representative body of club members ever assembled. Twenty-six states were represented. The principal object of the organization is to interest other boys and girls in the club movement. Boys' and girls' club work in Colorado ranked first last year in the northern and western states. Reports this year show that in many counties an unusually large percentage of the members are completing the work, several as high as 100 per cent, thus assuring a creditable standing for Colorado this year in club work.

Mr. MacTavish attended a christening where the hospitality of the host knew no bounds except the several capacities of the guests. In the midst of the celebration Mr. MacTavish rose up and made the rounds of the company, bidding each a profound farewell.

"But, Sandy, man," objected the host, "ye're not goin' yet, with the evenin' just started?"

"Nay," said the prudent MacTavish, "I'm no' goin' yet. But I'm tellin' ye good night while I know ye all."

"How's this?" asked the lawyer. "You've named six bankers in your will to be pallbearers. Of course, it's all right, but wouldn't you rather choose some friends with whom you are on better terms?"

"No, Judge, that's all right. Those fellows have carried me for so long they might as well finish the job."

Comment by Farmer Putnam

SORGHUM AND RATTLESNAKES TOPIC OF OUR MISSOURI FRIEND'S CONTRIBUTION OF HUMOR.

SORGHUM and rattlesnakes is my topick fur today. I reckon that's the way to start. Anyhow that's the way them speechmakers done at the Farmer's Congress and Farm Burro meetin' in Fort Collins. I was a-goin' to write about them meetin's but the editor sez: "Fur heaven's sake Tom, lay off my subjecks. I spend the company's money goin' to farm conventions and come back and write a book about them big gatherin's and its printed in the magazine. You go along and kid them farmers and write a lot of nonsense about what was did and our articles appears in the same issue. Well the next thing I hear is 'Well Farmer Putnam give us a grand story on the Congress didn't he.' That's all they read; they never see my stuff and half of 'em believe them durn lies that you write. Now this time you take some other subjeck and let me do my articles on the Fort Collins meetin's."

Woof, woof, woof, woof! Gee, he barks just like Josephine! I didn't know it made him sore to follow up his long winded literary short-comin's with a little punchy stuff, but so long as he believes in hisself he should ought to be left alone in his dignity! Hence therefore I'm not writin' about the big gatherin's at Fort Collins but choosin' a subjeck that comes to me from a lady subscriber—God bless 'em—in Kiowa county. (They need it.)

Here's what comes from the lady: "I would be glad if Farmer Putnam would pass judgment upon the sample, as he is from the Show Me state, and I have always heard that all Missourians like 'lasses on their cornbread, consequently he ought to be an infallible connoisseur."

I reckon that's nice of her—all but them last two words. I hope she didn't call me nuthin' that I aint.

Now about that sorghum. I reckon the lady wants a regular report on it like them county agents has to make to the government this time of the year, so here it is, as follers:

Received: — on 4 p. m. rural delivery; quantity: two ounce bottle; color: brownish; taste: sweetish; consistency: sticky; use made of sample: spread on pancake; kind of pancake: buckwheat; brand of buckwheat: X, Y, Z; size of package: 12 ounce; where bought: Littleton; price: 20 cents; where money came from: Josephine's allowance.

I could go on that way, accordin' to the annual report form, but it would finally land me in a field of buckwheat instead of cane, so that's about all, exceptin' to say, under the head of REMARKS: The sample was fine; if the sorghum is anything like sample it ought to satisfy even the most finicky taste.

Now this same lady wants to know somethin' else. She sez thar's a Texan down in Kiowa county that is imitatin' Arthur Chapman's poetry and is a fust class poet but lame in zoology, the trouble bein' found in the follerin', headed "Out Where the West Begins":

Out on the plains so parched and brown,
Where the coyotes howl when the sun goes down,
Where the prairie dogs bark and the rattlesnakes hiss,
Oh, Lord, deliver me from a land like this.

Now what the lady is askin' me to decide is, do rattlesnakes hiss? Before answerin' that I wish to say that this here Texas feller found somethin' in his Christmas sock on Out Where the West Begins that was better'n his own, as follers:

Out in Colorado, and Kiowa is the county,
Where the ranchers all thank the good Lord for His bounty,
Where the plains are brown in the fall o' the year,
And the grasses grazed by the fat, frisky steer;
Yes, the prairie dogs bark, but the rattlers rattle,
And often have bit the unwary cattle.

I'm a purty accommodatin' feller most of the time, specially when the ladies is askin' a favor, but I don't hardly know how I'm a-goin' to answer this one and still tell the truth. Speakin' off hand I'd say the lady is right; rattlers don't hiss, but a feller don't never want to be hasty in expressin' opinions on what a rattlesnake's liable to do under some circumstances. I'd like to tell you all a little story; yep I guess I will tell it.

My old man left Missouri when I was a kid and we settled down in the southwest till we was driv' back by circumstances and weather over which we had no control. We was told before we went out to that country that it was not thickly settled, but when we got on our homestead we made about the same discovery that Cactus Charley done. We didn't find many humans, but when it comes to prairie dogs, jackrabbits, rattlesnakes and owls the country was alive. It was great fur us kids, because we didn't have no boys' and girls' clubs in them days and couldn't jine nuthin', and we couldn't go to the movies, because them wasn't thought of; and we didn't have no Sunday-school and not much day school, exceptin' such as we could go to about three months in the year in a little sod house, with a homesteader's wife fur teacher.

Of course we had to have some amusement so we started a menagerie, me and my brother Ab. We set snares fur prairie dogs and caught three of 'em and a owl and put them together in a big goods box that some of our stuff had been shipped in. I was satisfied with our collection, but Ab was of the explorin' kind and he said he wanted his zoo to be complete, and that he had to have a rattlesnake. He went over to see a queer kind of geezer that lived on the next section which they called Rattlesnake Jim. This Jim was all the time claimin' to make snake oil liniment outen rattlers and sellin' the skins fur neckties and hat bands. Ab told him he wanted a rattler fur our zoo and wanted him to pull its fangs so's it couldn't bite us. Jim was willin' to accommodate us, because he liked us kids. He was leadin' a lonesome life and most people that come by that way was afraid to stop at his place, because he allus had a passel of snakes around. They didn't seem to bother him none, but rattlesnakes don't like strangers.

"Sure I'll let you have Pete, my old pet rattler and I'll keep a lookout fur another one when I'm out after snakes ag'in in the spring," sez Jim. "I've got three or four others around and I won't miss Pete. His rattles has dropped off and he's had his teeth pulled and cain't do you no harm. Wrap him around your neck boy and take him home."

Ab said he'd ruther put him in a box and he done so, and Pete was put in our zoo. Ab become very much attached to Pete and got in the habit of takin' him around to places. Onct thar was a travelin' preacher come to the new frame school which was put up in the settlement six miles from our claim, and we drove over of a Sunday mornin' with our basket dinner intendin' to stay all day. That's the way they had meetin's in that country—all day long. Preachers wasn't so plentiful in them days nur so well fed or well eddicated, but they was more fiery and plain spoken. Now this travelin' preacher believed in the old fashioned hellfire and damnation doctrine and he landed on us settlers with both feet, tellin' us that we was headed straight fur perdition if we didn't mend our ways. He told the story about Adam and Eve and said:

"Now my friends, we're in a country where there's lots of rattlesnakes. And them is the pizenist vipers that is, and it was one of them that spoke to Eve and persuaded her to bite the apple which has brought sin in this world, and every man of you that follers sinful ways is no better'n the rattler that decieved Eve.

Just then a hissin' sound was heard in the back of the hall and the preacher stopped fur a minit. Then he shouted: "I hear some hardened sinner hissing my remarks and the sound reminds me of what he'll hear when he begins to sizzle down in the pit of perdition fur bein' so sinful as to mock the word of the Lord."

S-s-s-s-s! S-s-s-s-s-s! It come ag'in, louder 'n ever.

Ab was standin' up by this time peepin' into his box and tryin' to make the snake shut up. The preacher seen the noise come from that direction and he sez, pointin' his finger at Ab:

"Young feller you don't know what you're a-doin': You're headed straight fur perdition."

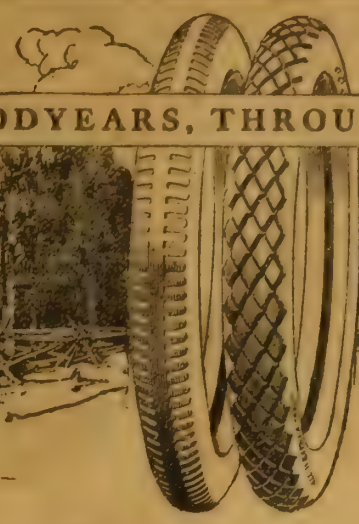
"Mister it ain't me," sez Ab, cryin', "it's Pete!"

"All right," sez the minister, "you tell Pete the devil is on his trail."

Just then Ab busted fur the door and me after him. We jumped into the buggy, leavin' the folks to come home with the neighbors. Pete died suddenly that same night and Abb ett his meals standin' up fur three days. Our dad was a prayerful man and he was hurt by Ab's prank and he passed the hurt on to Ab.

Now lady I don't want to be too sure because Pete was intelligent and he might a been justified in hissin' because his rattles had been pulled, so I cain't say fur sure that the common, ordinary rattler hisses, but Tex sez in his poetry that they do, so it's up to him to prove it.

Thos. Jefferson Putnam.



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Alongside the famous 30 x 3½ inch Goodyear All-Weather Tread Clincher shown here, is its companion, the 30 x 3½ inch Goodyear non-skid.

More than 5,000,000 of these Goodyear non-skid tires have been sold in the last five years.

Built of the same high grade Egyptian cotton fabric that goes into the All-Weather Tread Goodyear, with a long-wearing but differently designed tread, they have given remarkable service.

Their splendid performance has proved to thousands of car owners the folly of buying unknown and unguaranteed tires of lower price.

Ask your Goodyear Service Station Dealer about them.

30 x 3½ Non-Skid Fabric	$10.95
30 x 3½ All-Weather Fabric	14.75
30 x 3½ All-Weather Cord	18.00
30 x 3½ Heavy Tourist Tube	2.80
30 x 3½ Regular Tube	2.25

Manufacturer's tax extra

GOODYEAR

Corn and Seed Show With National Western.

Pick out your ten best ears of seed corn and your best peck of threshed grain and send it to the second annual State Corn and Pure Seed Show at the National Western Stock Show in Denver, January 14—21. There will be premiums for every kind of corn and grain raised in the state. Special classes have also been arranged for the boys' and girls' clubs.

Corn and seed growers from all over the state are eligible and specially invited to show their corn and seed grain. The best way to test the quality of your own product is to compare it with that of others and a public state show is the best place to do that comparing. An impartial judge renders the decisions.

The show will be conducted by the State Farm Bureau again this year. It has been suggested that those farmers who have county agents in their respective counties send their exhibits through their agents, but those who are not fortunate enough to have agents may send their shipments direct.

Those intending to exhibit should write to F. J. Chase at the Agricultural College at Fort Collins for a premium list and further particulars. In any event, send in your corn and grain and show other communities in the state what your community can do.

That Grain Price Smash.

"Absence of foreign demand proved a burden on the market," "Foreigners failed to display any interest whatever" and "There was absolutely no export inquiry either for Canadian or American grain noted," are statements which characterized excuses given in the Chicago grain market as prices tumbled to lower levels recently.

At the same time, the press associations, daily papers and farm journals, were carrying the national appeal for a federal probe of the "real reasons for ruinous grain prices" made by C. H. Gustafson, president of the U. S. Grain Growers, Inc., to the farmers in grain producing states. Export figures of the U. S. Department of Commerce, quoted by Mr. Gustafson, show that 90,000,000 bushels more wheat has been exported during the first ten months of this year than in 1920, despite the fact that the excuse generally given for low prices in the grain markets for several months is that there has been "no foreign demand."

"Every farmer who grows grain should write to his congressman and urge early action on Senate Resolution No. 133, which provides for an investigation of the real factors that have smashed grain prices despite exports that break all previous records," says Mr. Gustafson.

No Herd Law in Colorado.

I am troubled by my neighbor's cattle which have done considerable damage. There is no lawful fence here in this country. Can you give me some information on the subject?—W. M. P., Kit Carson County, Colo.

There is no herd law in Colorado. We have what is known as a fence law, which defines a three-wire fence as being lawful. Cattle breaking through such fence can be held by the owner of the property, who can recover for damage inflicted by them. In the absence of a lawful three-wire fence, the owner of the cattle cannot be held for the damage.

You Need MUSIC in Your Home This Year

No individual gift will mean more toward the welfare and happiness of your own family than one of these beautifl instruments.

—The AMPICO Reproducing Piano (uprights and grands).
—Chickering & Sons (uprights and grands).
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Records, Sheet Music, Orchestral Instruments.

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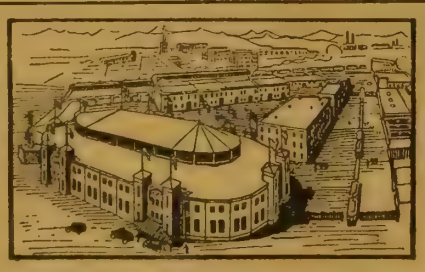

A School for Breeders and Stockmen

National Western STOCK SHOW

DENVER

January 14 to 21, 1922

Every Day is a Big Day--Don't miss any of them

Saturday, Jan. 14—Students' Judging Contest.

Sunday, Jan. 15—All exhibits open to public. Colorado Day.

Monday, Jan. 16—Judging begins in breeding classes. Grand Opening, Horse Show, 8 P. M.

Tuesday, Jan. 17—Stockmens' and Farmers' Day. Judging continued. Horse Show, 8 p. m.

Wednesday, Jan. 18 — Agricultural College Day. Judging continued. Shorthorn and Hereford sales. Horse Show, 8 p. m.

Thursday, Jan. 19—Denver Day. Judging Completed. Horse Show Matinee, and night.

Friday, Jan. 20—Neighboring States Day. Popular Horse Show Matinee, and Spectacular Night Performance.

Saturday, Jan. 21—Lodge Day and Ladies' and Childrens' Day. Morning and Afternoon Matinee and Grand Final Horse Show Program.

Fare and a half rates on all railroads in ten western states

Ask Your Agent.
Good Returning to Jan. 30.

The Whole Family will Enjoy the National Western

The Rural Household

Questions about home problems promptly answered by letter and through the magazine. Letters from women containing helpful suggestions for improvement of rural life are always welcome. Address all communications to Editor Home Department, Western Farm Life, Denver, Colorado.

New Year's Eve.

Ring out, wild bells, to the wild sky,
The flying cloud, the frosty light;
The year is dying in the night;
Ring out, wild bells, and let him die.

Ring out the old, ring in the new;
Ring, happy bells, across the snow;
The year is going, let him go;
Ring out the false, ring in the true.

Ring out the grief that saps the mind,
For those that here we see no more;
Ring out the feud of rich and poor,
Ring in redress to all mankind.

Ring out a slowly dying cause,
And ancient forms of party strife;
Ring in the nobler modes of life,
With sweeter manners, purer laws.

Ring out false pride in place and blood,
The civic slander and the spite;
Ring in the love of truth and right,
Ring in the common love of good.

Ring out old shapes of foul disease,
Ring out the narrowing lust of gold;
Ring out the thousand wars of old,
Ring in the thousand years of peace.

Ring in the valiant man and free,
The larger heart, the kindlier hand;
Ring out the darkness of the land,
Ring in the Christ that is to be.

—Alfred Tennyson.

Arbor Day Observance.

To mark the fiftieth anniversary of the first Arbor day in the United States the American Forestry Association of Washington asks for the co-operation of the woman's clubs, civic organizations and schools of the country. The first Arbor day was observed in 1872 in Nebraska when, on January 4, the State Board of Agriculture adopted the resolution of J. Sterling Morton, "That Wednesday, the tenth of April, 1872, be especially set apart and consecrated for tree planting in the state of Nebraska." In 1885 the Nebraska lawmakers changed the date to April 22, Mr. Morton's birthday.

"This year of 1922 should be the banner year in tree planting," says Charles Lathrop Pack, president of the American Forestry Association, in issuing the call. "Every club and school in the land should make plans to honor J. Sterling Morton, the father of Arbor day. The association urges particularly the schools complete the vote for the national tree. Instruction in taking this vote will be sent any school teacher. Every memorial tree planted should be reported to the association for registration on its national honor roll. This applies particularly to the memorial trees and Roads of Remembrance being planted by the American Legion and similar organizations. There has been a great awakening to the need of forest protection. Everywhere the people are interested in tree growing and tree values as never before. In hundreds of places civic improvements are put to completion with memorial tree planting as the cornerstone of the plans.

To the association at Washington comes the suggestion from Great Britain that a cathedral forest be planted by the allied countries. Mrs. Millicent Morrison, secretary of the Roads of Remembrance Association of Great Britain says the place for such a forest may be the Shakespeare country and each national could have a memorial road leading by various avenues to one central point where a land lighthouse would give the light of unity to the world. Perhaps something like that can be done in this country with each of the states having a part. There indeed would be an international memorial. It would be on a great scale what the association has started at Washington with the planting of Armistice elms at the head of International avenue on the grounds of the Lincoln Memorial according to the plans of Lieut. Col. C. O. Sherrill. There is a groundwork for big things. The American Forestry Association at Washington will send you tree planting instructions and a tree day program for the asking. Ask and start something now.

Tired Mother Gets More Advice on Hospitality.

(Continued from Page 4.)

with the stranger or town folks, never taking any pay from any of them. Now what I want to say is something that might give Tired Mother some relief. How well do I remember those days when a lad of 8 years, and this particular day was my first trip to town, as much of a town as there was in those days in the cow country. There was a man living in that town that came with his friends to our ranch on a hunting and fishing trip every year. He would put up at my father's house for a week at a time, bring in their game and salt it down, never offering any for the table. He was one of many who used to do the same thing. Well, on this day of days, and there is only one great day in any boy's life, my father and I were in town and we met Mr. Jones. He shook my father's hand and as town ginks do, asked all kinds of questions about the ranch, patted me on the head and said, "Some day you will own a ranch, won't you, Bub?"

And right then I could have eaten a muskrat, I was so hungry, and I was thinking all the time he would ask us up to their town house to have dinner. Well, he asked about the fishing and if there were many ducks flying (and I was still getting hungrier). Then to my great disappointment he drew his watch out of his pocket and said, "Well, it is about ten after twelve and my wife will give me the dickens if I am late for dinner. Will see you later, Ben," and off he hikes, leaving us standing on the sidewalk. I said, "Papa, why didn't he ask us to dinner?" Dad explained that he guessed that the town people were ashamed to have us country folks come in their house. And in my boyish mind I made a vow that the tale of the Good Samaritan was all bunk and no stranger eats at my table that don't pay just what he would have to pay at the town cafe. My personal friends and neighbors are welcome and I am glad to have them come, but when I let my wife cook for a bunch of grub hunters, like my mother and sisters had to do and thousands of farm women have to, I hope that some one will shoot me for a Gowie. Charge 'em, make 'em pay, and then they won't drop in for a meal not being invited.—F. A. N., Washington.

* * *

The Pastor's Family, Too!

Dear Editor—Just a few lines in reply to Tired Mother's letter. I'd love to shake hands with her. I've had some of her troubles myself, exactly alike. I tried to persuade my good man to let us run over and see some of our regular drop-ins, and all to no avail. We could not be low enough to drop in on any acquaintance at meal time. Yes, I was willing to try it, because I was the one that had to wait till I had served all and neglected my family for them, but now find out you can do it all your life. I made up my mind I'd let the boss know who he could ask. Some of our friends didn't think it was Sunday unless they came to see us, full cellar and chicken! When I'd go back they were just gone out. Some live that way, dropping in on others. I'd never be forgotten by some to hear them exclaim on a full stomach, but I had my fill out in the country. Our pastor's family would come to visit. No phone to let the tired mother know; maybe housecleaning, they don't mind, but I did. It wasn't so bad, four of the pastor's family, but when it came packed so full of some girl friends or boy friends I got sick of even the pastor's family. Now when we go to church my good man takes his little family to the restaurant. This is a little relief. I am not living in the country now, and I don't get those drop-ins any more, because my poor old legs got tired and I can't roll pie crust, but it doesn't seem to me, I am one-third as popular.—Tired Mother from Montana.

* * *

A Note of Cheer.

To "Tired Mother"—A hospitable country home is always a joy to visitors and members of the family as well. But the burden falls on the mother in most cases. Now this mother is cook, dishwasher, laundress, seamstress, dairy maid, housemaid and general handyman, which means she takes care of the poultry, garden, fruit and lawn, if there is any, for the men folks "simply can't take the time."

She is supposed to be the "homemaker" as well, which means she shall be smiling and cheerful at all times and thus create a pleasant atmosphere for husband and children. She must study the different dispositions of the children (and also that of husband), and use tact with each, and in such a way that one child will not feel like an outsider

and another classed as a pet. She must ever be alert to guide the little minds into channels of right thinking in morals, health and industry. In fact, she is expected to be what our schools stand for, the maker of good citizens. She is glad to do all this to the best of her ability, but she feels there should be just a few minutes a day all her own, not exactly for pleasure or for recreation, but for invoicing so to speak, just to find where she is "at."

She enjoys company as much as the other members of the family, perhaps more, for usually she has less opportunity to exchange ideas. She does not object to agents and other wayfarers, for they bring her news of the world that she would get in no other way, and they are not so very critical of things in general and cause but little extra work. She does not object to the neighbors, for they understand conditions and it is a game of give and take with them. It is the casual time-killing visitors who drop in, not for a friendly visit, but for the good things to eat, who cause the troubled thought and consume the time that should be the mother's.

These are the ones who do not understand and who are the severe critics. Do they ask you to come to visit them? Perhaps, but in such a way that you know they do not mean it and that they would even be ashamed to have you come to their front door.

The home is the mother's place of business. The American Magazine tells us that the Nash Company, Inc., has applied the Golden Rule, with wonderful success in their business. Now why can't "Tired Mother" say, "All things whatsoever ye would that men should do to you, do ye even so to them."—A Well Wisher, Larimer County, Colo.

* * *

Six Children in 13 Years.

I have read Tired Mother in the November 15 issue with pleasure. I must say there are doubtless thousands of we tired mothers who are in sympathy with her. Oh, very much indeed, but I am unable to see what is to be done about it except to lecture his highness, the head of the house. And fortunately or unfortunately, we women were made as a helpmate for man to obey and serve him to the best of our ability. I find it all through the Bible, the women were to obey and serve and bear all the children possible. Don't think I don't like to see women get along nicely and have a good time and plenty, for I do.

I have been married thirteen years and bore six children for my husband and can say with truth I am another tired mother. I wonder if we all do our share, absolutely all we can to help our helpmate and, have we all learned not to nag when he is "tired father." I also wonder if the men who read this have learned that their wives get tired and blue and need a cheery word or compliment once in a while, and that too much faultfinding makes a woman "don't care." I think the Golden Rule very beautiful when it is used, but so many people I find in this world have made one to suit themselves: Instead of "Do unto others as you would they do unto you," they use it so: Do others as you think they would do you if they got the chance. Well, I will quit and give some one else a chance to get in a word. —An Idaho Tired Mother.

State Poultry Show.

The first annual show of the Colorado Poultry Producers' Co-operative Association was held at Denver, December 12 to 17, bringing out strong competition not only from the state, but from neighboring states as well. While the show was not as large as had been anticipated, the quality of birds exhibited was pronounced extraordinary. James A. Tucker of Royal Oaks, Mich., a national authority, was in charge of the judging, assisted by Prof. J. C. Jameson, Extension Poultry Husbandman of Colorado Agricultural College.

The association is new, but good progress has been made in the few months of its existence toward getting the poultry producers of Colorado together in one organization, the purposes of which are improvement in quality of birds and better marketing of breeding stock, baby chicks, broilers, fryers and eggs. Plans are being formulated for marketing co-operatively and for a more unified development of the poultry industry of the state, both from the standpoint of the fancier and that of the farm poultryman. Following are the awards announced by the judges:

Single Comb Black Minorca—First cock, first, second and third cockerel, championship male of the show. C. A. Spickerman, Colorado Springs.

Single Comb White Leghorn—First hen, first cockerel, first pullet. Phylena Spickerman, Colorado Springs.

Single Comb Orpington—First pen. J. A. Carruthers, Colorado Springs.

Barred Rocks—First hen, first old pen, third hen, fourth pullet, second cock, fifth cockerel, second young pen, Dr. George A. Flippin, Stromberg, Neb. First and third cocks, second hen. A. E. Seidell. Second and fourth cockerels, fourth pen. William DeRuss & Son. First old pen, first, second, third and fourth hen, first and fourth cock, third cockerel, first young pen, first, second, third, fourth and fifth pullet, William Keanmaster.

White Leghorns—Fifth cock, Denver View Poultry Farm. First, second, third and fourth cock, second, third, fourth and fifth cockerel, first, second, third and fourth hen, first old pen, first and second young pen, W. H. Sandew.

White Rocks—First pullet, second cockerel, Dave Whitton. First and second hen, first pen, first cockerel, first cock, second and third pullet, William Mathews.

Brahmas—First cock, first cockerel, first pullet, first hen, C. Bovey.

Rose Comb Reds—First hen, first cock, third pen, LaBelle Ranch. First, second and third cockerel, second young pen, J. J. Mellem. First young pen, first old pen, first and second pullet, second cock, second, third, fourth and fifth hens, Dr. A. W. Swedberg. Fourth and fifth pullet, fifth cockerel, Fred Foster.

Cornish Game—First and second cockerel, first and second pullet, Mr. Yegge.

Single Comb Reds—First cock, first and third cockerel, first pen, third and fifth pullet, J. R. Wilson. First hen, LaBelle Ranch. First and fourth pullet, third young pen, third hen, Sydney Este. Second cock, G. T. Maltby. Fifth young pen, George Littler. Fifth cockerel, Thomas Eydman. First old pen, second, fourth and fifth hen, third cock, H. C. Taylor. Second and fourth cock, W. F. Shipman. Fourth young pen, fifth cock, W. H. Smith. Fourth cock, S. R. Rigg. Second old pen, J. H. Jordan.

Partridge Wyandottes—All awards, S. C. Howard.

Single Comb Brown Leghorns—All awards, Mrs. Jasper Parrish.

Ancona—First pen, C. S. Gillette. First pen, first, second, third and fourth hen, first cock, W. F. Shipman. First, second, third and fifth pullet, W. H. Smith.

Utility Stock—Single Comb Reds—First pen, LaBelle Ranch; First cockerel, J. R. Wilson. Second cockerel, second, third, fourth and fifth pullet, Thomas Eydman. Second pen, J. B. McCollum. Barred Rocks—First cockerel, first and second pullets, Thomas Eydman. Single Comb White Leghorns—First and second pullet, Thomas Eydman. Third and fourth pullet, first and fourth cockerel, first, second and fourth cock, first, second, third and fourth hen, M. B. Kinkel. Second cockerel, R. E. Reynolds. Third pen, Jeffries. First pen, third and fourth pullet, Denver View Farm.

Buff Orpington—First pullet, Everett Hill. Bantams—Golden Seabright—First and second hen, Mr. Yegge. Brahma Bantam—Fifth pullet, second cockerel, Mr. Yegge. First pen, first cockerel, first, second, third and fourth pullet, J. E. Commins. Black Cochin Bantams—First cockerel, first and second pullet, first cock, first hen, Lenora Reynolds.

Muscoy Ducks—First and second pair, C. Johnson. Indian Runner Ducks—First and second pairs, Edith Lyttleton.

Boys' and Girls' Club—Single Comb Reds—First and second cockerel, first pen, first, second and third pullets, Gladys Reno. Third cockerel, Ernest Carlson.

Rosecomb Reds—First cockerel, first and second pullet, Lawrence Carper.

Black Leghorns—First hen, first cock, John Gibbons.

Brown Leghorns—First hen, Robert Atchison.

Romoco Farms Pamphlet.

Romoco Farms, Littleton, Colo., famed for quality Rhode Island Reds and specializing in egg production, have issued a descriptive pamphlet of the plant that is attracting much attention because of its artistic merit and the wealth of information it contains. The illustrations are especially striking, showing as a frontispiece an airplane view of the farms, and halftones depicting the interior arrangement of the plant, its various buildings and beautiful grounds. As a means of following up inquiries received through advertising the pamphlet could not be improved upon.

Buys Mountain View Flock.

The entire flock of 1,000 Exhibition S. C. White Leghorns belonging to Mountain View Poultry Farms, Edgewater, Colo., has been purchased by Mary Blake Kinkel of Blakeland Farms, Littleton, and moved to the new location. These birds are of the famous D. W. Young strain and among them are some of the most noted winners in America. This addition to Blakeland gives that farm an unexcelled line of Leghorn breeding stock. The Blakeland Business Birds, the original stock, are of the D. Tancred strain. Mrs. Kinkel is to be congratulated on her purchase.

Question of Heirship.

If an heir to an undivided estate dies before same is divided, is he still an heir and could his part be taken after his death for funeral expenses, or when he dies does that end his heirship? How much of the estate is the widow entitled to according to the Colorado laws?—A. B. L., Baca County, Colo.

Death before distribution did not affect the heir's right to the estate. The heir's part, therefore, could be used for any proper purpose such as funeral expenses. The widow has an allowance of $2,000 and in addition one-half at least of the property, real and personal, of the deceased husband.—Hamlet J. Barry, 724 Equitable Bldg., Denver.

Stock Raising Homestead.

I have made homestead entry upon 159 acres within the Battlement Forest Reserve. Am I entitled to make use of the 640-acre stockraising homestead, less the 159 I have already patented?—S. A. W., Delta, Colo.

"A person otherwise qualified who has partially exhausted his homestead right securing title to a tract of land is entitled to make an original entry under the stock raising act for such an area as will not, with said tract, make up more than 640 acres; and the distances between the two tracts involved is immaterial."

COW HIDES

Tan 'Em Up, Folks, Sure Beats Selling 'Em Raw

When the "Old Man" tells you that, he knows what he is talkin' about. Hides are still low and leather high. Most of you took my advice last winter, and from the piles of letters we get thankin' us for the fine goods we are turning out, I know you are well pleased. Folks our Wear-Well brand of Leather and Fur Coats and Robes can't be beat.

Old Man Omaha Hide

YOU KNOW ME, FOLKS

Dear Old Man: I want to say that leather I got from you is good and cannot be beat in repair work and making harness. R. J. Blumer, Garner, Ia.

I have always treated everybody right that ever done business with me. I know farmin' is up hill business these days. That's why me and my two boys have cut our tanning prices. It will pay you to send your hides to us and get 'em tanned into the famous Wear-Well brand Leather and Coats and Robes, the best on the custom market. Write me. Let me tell you about it, and send you samples.

WRITE TODAY FOR PRICES AND LEATHER SAMPLES

Omaha Hide & Fur Co 133 Lohse Bldg., Omaha, Neb.

Farmers, Trappers---Attention

LET US TAN YOUR HIDES AND FURS into useful articles, such as robes, coats, rugs, mittens, caps, fur sets or any kind of leather.

If you prefer selling, send your furs to us for full market value. WRITE TODAY for FREE fur price list, tanning price list and shipping tags.

The Bismarck Hide & Fur Co.
Bismarck, N. D.

HIDES TANNED

Send us your horse, cattle, and other hides and furs to be tanned and made up into FINE FURS, COATS, ROBES, MITTS, ETC., at a saving of 50%. We also tan harness and lace leather. All work guaranteed. Send for catalog No. 17 and shipping tags. KANSAS CITY ROBE AND TANNING CO., 219 Main Street, Kansas City, Mo.

500 Pullets Lay 22,660 Winter Eggs

In November, December and January

Eggs sold to the market for $1,400, and produced with $250 worth of feeds..... $1150 Profit in 3 Months

THEY WILL DO THE SAME FOR YOU when WINTER EGG PRODUCTION IS BRED INTO THEM. RESULTS ARE CERTAIN. If you get BIG WINTER EGGS and BIG PROFITS you must have FRANTZ'S BRED-TO-LAY-IN-WINTER LEGHORNS. Hatching eggs Guaranteed Fertile and 50,000 Strong Chicks you can Depend Upon, from our 1,800 Tested Winter Laying Hens. Also stock. Come and see us. Catalog free. Write

Osee C. Frantz, Box F, Rocky Ford, Colo.

Special prices to early buyers on baby chickens.

1,000 EXHIBITION LEGHORNS

PURCHASED

Blakeland Farms has purchased the entire flock, nearly 1,000 birds, EXHIBITION S. C. WHITE LEGHORNS, formerly owned by Mountain View Poultry Farms, Edgewater, Colo. No expense has been spared in the development of this flock. Among them are some of the most noted winners in this country.

40-Acre Breeding Farm

Blakeland has become a forty-acre breeding institution of two distinct strains second to none in this country.

BLAKELAND BUSINES LEGHORNS. Origin, D. Tancred Strain, the heaviest laying strain in America.

BLAKELAND EXHIBITION LEGHORNS. Origin, D. W. Young strain.

Place your orders now for EGGS, CHICKS, PULLETS, COCKERELS, PAIRS, TRIOS and PENS at BARGAIN PRICES.

Write for Catalogue B.

BLAKELAND FARMS ::: Littleton, Colo.

LOWER'S POULTRY FARM

ARVADA, COLORADO

Established 19 years.—Breeder of thoroughbred, heavy-laying type

Single Comb Rhode Island Reds

Three hundred of my heavy-laying pullets, for sale. $25 and $36 per dozen; also fine early hatched cockerels, hatched from my Special Matings, $5 and $10 each.

Eggs for hatching now ready from my tested, heavy-laying type hens, parent stock of the above mentioned pullets, all two hundred to two hundred fifty egg hens. DESCRIPTIVE BOOKLET ON REQUEST.

COCKERELS

Rhode Island Reds

Early hatched vigorous birds from the noted ROMOCO strain of heavy producers—bred up by "The Jack Monroes."

AGENTS FOR

DARLING'S MEAT CRISPS—High Protein Content.

ROMOCO MASH—$1.00 in 20-lb. bags.

Catalogue W on request.

Romoco, Littleton, Colo.

Booking Orders Now for Baby Chicks and Hatching Eggs—1922 Delivery.

SINGLE COMB

WHITE LEGHORNS

Heavy Winter-Laying Variety. Every egg guaranteed fertile. 15 for $2.50; 50 for $6.50; 100 for $10.50. Fifteen eggs free with each order of 100.

DAY-OLD CHICKS

25, $6.50; 50, $11.50; 100, $20.

Catalogue mailed free on request.

JACOB SCHLEINING,
Ordway, Colo.

64 BREEDS Most Profitable pure-bred Northern raised chickens, ducks, geese, turkeys. Fowls, eggs, incubators at reduced prices. 29th year. Largest plant. Large valuable poultry book and catalog free. R. F. NEUBERT Co., Box 853 Mankato, Minn.

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SOLD FOR STORAGE.

Singers, Whites, New Homes and others $10 to $40. Write for FREE Illustrated CATALOG. We pay the freight.

RELIABLE SEWING MACHINE CO.
532 15th Street. Denver, Colo.

Farmers' and Stockmens' Exchange

Advertisements will be inserted in this department for 7c per word; four or more consecutive insertions, 5c a word each insertion. Remittances can be made by postoffice money order or personal check. Every figure and initial counts as one word. Guaranteed circulation 55,000 copies each issue. Send us a trial advertisement. Write for proof showing how these columns pay advertisers.

POULTRY

LEGHORNS.

ROSE-COMB BROWN LEGHORN COCKERELS; State Fair winners, $2.50 each; 3 for $6. Mrs. John Heins, Gresham, Nebr.

CHOICE S. C. WHITE LEGHORN COCKERELS from my heavy laying strain, at $3 and $5 each. L. E. Larson, Fort Morgan, Colo.

WALKER'S WHITE LEGHORNS — SIXTEEN years in business; Hoganized stock; breeders 160 to 250 egg type. Why waste time and money on common stock, when our heavy laying strain will start you right at small cost. We hatch in Buckeye mammoth incubators, consequently we can sell you better chicks cheaper than those who still use old-style machines. Chicks, eggs. Write for catalog. Riverside Poultry Farm, H. D. Walker & Sons, Rural 2, La Junta, Colo.

PLYMOUTH ROCKS.

PURE BARRED ROCK COCKERELS—$2 AND $3; none better. A. J. Joslyn, Gillette, Wyo.

PURE BARRED ROCK COCKERELS FOR SALE —$3 to $10, if taken at once. Enos Plessinger, Cheyenne Wells, Colo.

300 BIG FINE BARRED ROCK COCKERELS; pullets $5 up; utility, show birds Dr. Flippin, Stromsburg, Nebr.

BARRED PLYMOUTH ROCKS, BRED FROM trap-nested heavy laying stock; winners in public contest. John Tobias, Wheatridge, Colo.

BARRED PLYMOUTH ROCKS—COCKERELS, both dark and light, $3, $4 and $5 each. Bradley and Latham strains. Chester Blunt, Route 1, Greeley, Colo.

BARRED ROCKS—THOMPSON'S "RINGLETS," dark, narrow barring, big-boned, vigorous cockerels; heavy laying strain; $3 to $7.50; satisfaction guaranteed. Arthur Waechter, Yuma, Colo.

ORPINGTONS.

S. C. BUFF ORPINGTON COCKERELS, $3 AND $5. J. P. Kauffman, Route 2, La Junta, Colo.

SINGLE-COMB BUFF ORPINGTONS, CHOICE cockerels. L. F. Lantz, Route 2, La Junta, Colo.

PUREBRED BIG-BONED WHITE ORPINGTON cockerels of culled laying strain, $2. Paul Diehl, York, Nebr.

SEVERAL VARIETIES.

"1949 COCKERELS, HATCHING EGGS, 49 VARieties" Free book. Aye Bros., Box 17, Blair, Nebr

DUCKS—ROUENS, PEKINS, RUNNERS, MUSCOVYS. Geese, African, China, Toulouse. John Hass, Bettendorf, Iowa.

PULLETS, COCKERELS, BABY CHICKS, OF all leading varieties at low prices. These are purebred from heavy laying strains; satisfaction, of course. Also booking orders for early hatched baby chicks Write for prices Denver Baby Chick Co., 2436 W. 43d Ave., Denver, Colo.

IF IT WEARS FEATHERS WE HAVE IT OR will get it for you. Dark Cornish Games, Black White-Faced Spanish, Spangled Hamburgs, Buttercups, Barred Rocks, Reds, Pearl Guineas, Mallard decoys, Muscovey Ducks. Write or phone your wants. Champney's Poultry Yards, 2057 S. Broadway, Denver.

DUCKS.

MAMMOTH WHITE PEKIN, MALLARD, MUSCOvey; $7.50 trio; classy stock. Champney, 2057 S. Broadway, Denver, Colo.

TURKEYS.

MAMMOTH BRONZE—TOMS, 20 TO 45 LBS., $10—$35; 15-lb. pullets, $8. Laura Ullom, Route 2, Lamar, Colo.

IDEAL MAMMOTH BRONZE TURKEYS; EXTRA fine, unrelated stock. Discount until January. W. S. Linville, Lamar, Colo.

PUREBRED MAMMOTH BRONZE TURKEYS— Fine stock. S. C. Buff Leghorn cockerels, Fairy White Indian Runner Drakes. A. L. Overmyer, Wiggins, Colo.

LICE AND MITE REMEDY.

MODERN LICE AND MITE REMEDY WILL ABsolutely remove lice, mites, stick-tight, blue bugs and all the blood-sucking pests from your chickens. It absolutely cleans your poultry premises of all breeds of vermin, by putting it in the drinking water. Write R. D. Laing, Rt. 2, Box 66, Denver, Colo.

PET STOCK

RABBITS.

THOROUGHBRED RUFUS RED RABBITS AT bargain prices. Brickell, Fairbury, Neb.

FERRETS.

FERRETS FOR SALE PRICE LIST FREE. Book on ferrets, 10c. Ferret muzzles 25c each. Bert Ewell, Wellington, Ohio.

LIVE STOCK

CATTLE.

RANGE BULLS—REGISTERED HEREFORDS and Shorthorns; reasonable prices. The Lowell Purebred Cattle Co., Union Stock Yards, Denver.

HOLSTEIN AND GUERNSEY CALVES, $25 each, crated for shipment anywhere. Edgewood Farms, Waterloo, Wis.

HEREFORDS FOR SALE—THE BIG STRONG vigorous range kind, out of dams and Anxiety-bred kind. A well marked bunch of these yearling bulls are ready for service now. Can you use any of them? J. O. D. Ranch, Aroya, Colo.

POSITION WANTED.

AS HERDSMAN OF PUREBRED BEEF CATTLE or hogs. A-1 references. Write Box 2-T, Western Farm Life, Denver.

HORSES.

ONE BLACK IMPORTED REGISTERED PERcheron stallion for sale or exchange. Enos Plessinger, Cheyenne Wells, Colo.

HOGS

GIANT CHERRY KING 13TH BOARS OUT OF Defender sows will put extra dollars in your [illegible]. The price is right. J. O. D. Ranch, [illegible] Colo.

[illegible] BIG TYPE REGISTERED DUROC Jersey gilts at almost market price. Prizewinning sows and boars at a bargain. Edgemoor Farm, East Bellevue ave., Littleton, Colo. Phone Englewood 211W.

DUROC JERSEY WEANLING PIGS, MALES, $12. Sired by Top Orions Giant, first prize aged boar at Topeka and Hutchinson; dams also prize winners; guaranteed to satisfy. W. F. Laumer, Hollenberg, Kan.

DUROC HOGS—35 SELECTED REGISTERED sows and gilts due to farrow in March; mated to son of Scissors, grandson of Big Bone Giant. Royal Pathfinder 4th; also September pigs that will please the most critical buyer. Write or come. Dr. C. O. Rice, Mountain View Duroc Farm, Denver, Colo.

SHEEP.

OXFORD EWES AND RAMS FOR SALE.— GEO. W. Damrow, Roca, Nebr.

FARMS AND RANCHES

FOR SALE OR TRADE—IMPROVED HALF SECtion, with water; good reasons for selling. J. E. Harron, Alamosa, Colo.

CASH BUYERS WANT FARMS, SPRING DELIVery, from owners only. R. A. McNown, 334 Wilkinson Building, Omaha, Nebr.

WANTED—TO HEAR FROM OWNER OF GOOD ranch for sale. State cash price, full particulars. D. F. Bush, Minneapolis, Minn.

SELL YOUR PROPERTY QUICKLY FOR CASH, no matter where located. Particulars free. Real Estate Salesman Co., Dept. 11, Lincoln, Neb.

FARM WANTED—WANTED TO HEAR FROM owner of a farm for sale; give lowest price, full information. L. Jones, Box 631, Olney, Ill.

SELL, BUY OR EXCHANGE, FARM OR CITY property, quickly, no matter where located. Circular "G" free. Farm Sales Bureau, Barry, Ill.

WANTED—TO HEAR FROM OWNER HAVING farm for sale; give particulars and lowest price. John J. Black, 33rd Street, Chippewa Falls, Wis.

80 ACRES 4½ MILES SOUTH OF HOTCHKISS, Colo., in Delta county; 30 acres in fruit, 30 acres in alfalfa, 10 acres to plant anything, 10 acres in pasture; good water rights, good house, good barn; with it goes about 80 chickens, 3 milking cows, about 8 heifers and calves, and all materials. All this for $9,000. One-quarter or more can be paid down and the balance in payments for four years. Write to the owner today and for better information. Frank Eleopulos, 315 E. Front St., Rawlins, Wyo.

FOR SALE TO HIGHEST BIDDER—UNTIL FEBruary 1, 1922, sealed bids for cash will be received for the sale of the following real estate: 304 acres (west half section 31, township 26 south, range 43 west, in Prowers county), 22 miles from railroad, all fenced with 2 and 3 wire fence; 45 acres in cultivation, 250 acres sloping prairie fram land clear of stone, balance pasture; creek water all year; well 100 feet deep; half dugout 14x16 feet; sheds 20x40 feet. Ideal wheat and stock farm. Joins 200-acre alfalfa farm. Owner non-resident. Title perfect. Certified check for one-fourth of purchase price must accompany bid, payable to Vesta Tune, care Bank of Baca County, Two Buttes, Colo. One-fourth in two years. Balance ten years, terms at 7 per cent interest. Inspection of land at bidder's expense. Bids close February 1, 1922. Owner reserves right to reject any and all bids. Mrs. Vesta Tune, Lycan, Colo.

POSITION WANTED.

YOUNG MAN, SINGLE, WISHES YEAR-ROUND position on a ranch; references exchanged. State wages and particulars. Address Box 4-S, Western Farm Life, Denver, Colo.

HELP WANTED

RAILWAY MAIL AND GOVERNMENT CLERKS —Carriers, $125—$190; experience unnecessary; particulars free. Write Mokane Institute, Dept. 663, Denver, Colo.

STUDY BOOKKEEPING BY MAIL—TAKE ADvantage of the long evenings; easy to learn; rates low; sample lesson free. Stevens Point Business College, Stevens Point, Wis.

SALESMEN WANTED FOR COLORADO AND ADjoining states to sell Western Farm Life. Experience in this line unnecessary. Men with cars preferred. A good paying proposition to men who produce. Apply Circulation Manager, Western Farm Life, 1518 Court Place, Denver, Colo.

$110 TO $195 MONTH; HUNDREDS U. S. GOVernment positions now obtainable. Men, women over 17 wanted. Steady work; no "lay-offs." Short hours. Vacations with pay. Common education sufficient; pull unnecessary. Write immediately for free list positions. Franklin Institute, Dept. T126, Rochester, N. Y.

SEEDS

ALL SEEDS ARE A SEALED MYSTERY—BUT they can be reliable to a high degree by tests for germination and purity; pedigree also has much to do with it. Send for our (free) 1922 year book, tells you all about good seeds. The Rocky Mountain Seed Co., Denver, Colo.

HUBAM CLOVER—CERTIFIED SEED OF THE earliest strain, Idaho grown. De Kalb County Agricultural Ass'n, DeKalb, Ill.

LUMBER

FIR LUMBER, MILLWORK, RED CEDAR SHINgles, fence posts, from mills to you. Send bill for delivered prices. Lansdown, Box 909M, Everett, Wash.

MISCELLANEOUS

HONEY.

"THEBESTO ROCKY MOUNTAIN HONEY," none better; satisfaction guaranteed or money back; five-pound can, postpaid $1.50. Send remittance with order. Write for price on large quantities. The Colorado Honey Producers Association, Denver, Colo.

GROCERIES, MEATS, ETC.

SEND FOR OUR WHOLESALE WEEKLY PRICE lists. It will keep you posted on the rock-bottom prices, and will help you save from 25 to 40 per cent on your supplies. Stock Growers Wholesale Supply Co., 1523 19th St., P. O. Box 1442, Denver, Colo.

Stockgrowers to Meet.

The Colorado Stockgrowers' Association will meet in annual session during Stock Show week, the dates being January 16 and 17, and the place, as usual, the Albany Hotel. Big things are planned for 1922 and the annual meeting is the occasion for launching them. The announcement of the secretary, Mrs. Evelyn Castle, states that the tentative program for the new year includes constructive policies in the way of co-operative marketing, continuing the fight for lower freight rates; reduction in yardage charges; fixing of grazing fees on a fair basis; legislation, state and national; campaign for better livestock; efforts to initiate a nation-wide eat-more-meat campaign and other constructive measures. Following is the official call for the convention:

The Colorado Stockgrowers' Association will hold its forty-eighth annual convention at the Albany Hotel, January 16-17, 1922, Stock Show week, Denver, Colo.

We feel that you are coming primarily to attend the sessions of the convention, and we want you to remember that you are not wanted at the Stock Show until you have attended to your own business. Your place is at the convention from start to finish. The future of the livestock industry depends very largely on whether or not you are interested enough to take an active part in the only organization that is your direct agent for promoting your business and protecting your interests.

Colorado is unusually fortunate this year, with a national livestock convention, state livestock convention and stock show all in consecutive order. Representatives from all over the United States will attend the national convention at Colorado Springs, and many have already indicated their intention of stopping off at Denver and attending the state convention. They will be interested in what we have to say and what we have to show. So, Colorado stockmen, it is up to you!

An excellent program is being arranged. Men of national renown will be here to address the convention and help solve your problems. But the all-important feature of the convention this year will be the "get together Colorado stockmen" session, at which time every one engaged in the livestock industry will be given an opportunity to be heard.

Bring the ladies of your family to the state convention. Special invitation is extended to them. Entertainment will be provided that will make their visit happy and pleasant.

Remember, reduced rates on all railroads is a big inducement to make this trip this year. Every stockman in the state of Colorado is urged to attend this very important meeting.

This is a personal invitation to every person engaged in the growing, breeding or feeding of livestock to attend the convention of the Colorado Stockgrowers' Association and make it valuable to you and your industry. There is no excuse for the stockmen of Colorado not to have the strongest state organization in all the west. Get behind the movement that tends to bring back the industry to normalcy—that of a strong organization—united effort on the part of all—for the greatest good to the greatest number.—M. J. McMillin, president; Evelyn D. Castle, secretary.

PATENTS.

PATENTS—BOOKLET FREE. HIGHEST REFerences. Best results. Promptness assured. Send model or drawing for examination and opinion. Watson E. Coleman, Patent Attorney, 624 F St., Washington, D. C.

BUTTER WRAPPERS.

GUARANTEED BETTER BUTTER WRAPPERS— 100, 60c; 250, $1.50; 500, $2.50; 1,000, $4.25, printed to order. Home Specialty Co., Middleton, Idaho.

FUR.

FOR BEST PRICES SHIP YOUR RAW FURS TO The North American Fur Co., 817 N. Third St., St. Louis, Mo.

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HOMESPUN CHEWING AND SMOKING TOBACco, 5 lbs. $1.25; 10 lbs., $2.50; 20 lbs., $4. Farmers' Union, Mayfield, Ky.

TOBACCO—KENTUCKY NATURAL LEAF CHEWing, 10 lbs. $3; 20 lbs., $5; smoking, 10 lbs., $2.50; 20 lbs., $4. Walter Veal, Agt., Sedalia, Kentucky.

TOBACCO—NATURAL LEAF, SWEET AND mellow hand-picked chewing or smoking, 5 lbs., $1.50; 10 lbs., $2.50. Smoking, 20 lbs., $4. Furnish free recipe for preparing. Quality and delivery guaranteed. Farmers' Tobacco Exchange, Sedalia, Ky.

KENTUCKY LEAF TOBACCO—8 YEARS OLD, nature cured; don't send a penny, pay for tobacco and postage on arrival. Extra fine quality chewing or smoking, 10 lbs. $2.50; medium quality smoking, 10 lbs. $1. Farmers' Union, Hawesville, Ky.

RUGS.

YOUR OLD CARPETS MADE INTO NEW RUGS. Write for folder. Lincoln Rug Factory, Dept. A, Lincoln, Nebr.

TANNING.

LET US TAN YOUR HIDE—COW AND HORSE hides for fur coats and robes. Cow and steer hides into harness or sole leather. Catalog on request. The Crosby Frisian Fur Co., Rochester, N. Y.

INVENTIONS.

INVENTIONS WANTED—CASH OR ROYALTY for ideas. Adam Fisher Mfg. Co., Dept. 204, St. Louis, Mo.

MUSIC.

NO MONEY NEEDED FOR PUBLICATION— poems set to music and published free on commission. Middlewest Music Publishers, 1154 N. Clark St., Chicago, Ill.

AUTO PARTS.

WE HAVE A COMPLETE STOCK OF DIFFERentials, transmissions, auto parts, springs, axles and accessories; prices 50 per cent of list. Inquiries given prompt attention. Keystone Auto Wrecking Co., 1718 Oak St., Kansas City, Mo.

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Warning! Unless you see the name "Bayer" on package or on tablets you are not getting genuine Aspirin prescribed by physicians for twenty-one years and proved safe by millions. Take Aspirin only as told in the Bayer package for Colds, Headache, Neuralgia, Rheumatism, Earache, Toothache, Lumbago and for Pain. Handy tin boxes of twelve Bayer Tablets of Aspirin cost few cents. Druggists also sell larger packages. Aspirin is the trade mark of Bayer Manufacture of Monoaceticacidester of Salicylicacid.

100 Men Wanted at Once

You can be one of the men placed by us in a high-salaried position as a motor mechanic. Once you have this trade mastered you are independent. Jobs hunt you. The man with no specialized training must take harder work with less pay. Our course is thorough and practical, including paid shop work under personal direction of R. G. Dashbach, Barney Oldfield's speedway mechanician. We must soon place 100 more men—in good positions—special rates to next 100 enrolling. Write today.

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A Wonderful Apple

It has the juicy tartness of the Jonathan, the meatiness of the old Winesap, the beauty of the Winter Banana, the deep gold color of the Grimes and the keeping qualities of the good old Ben Davis. Strong grower, healthy and vigorous. Originated in Utah and should be hardy everywhere. Bears young and very profusely.

True Delicious Apple

This is the ideal farm apple. Large fruit, beautiful dark red, quality unsurpassed. Flavor sweet, slightly touched with acid, comes out of storage in perfect condition.

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A new variety, vigorous growth, very hardy, very early and an abundant bearer. Good shipper; keeps for weeks after ripening.

Perfection Currant

In our entire experience this is the best bearer, the largest, sweetest and easiest to pick. Rich, mild flavor, less acid and few seeds.

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All kinds of Fruit Trees, Plants and Shrubs, Vegetable, Flower and Field Seeds, etc., of the best quality, at very low prices. Get our Big Free Illustrated Catalog and prices before you buy.

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ABORTION TABLETS

ABORTION CAN BE CURED

A Missouri man says, "Sure worked O. K. We had 3 cows that were making bag at 6 months. Am sure they would have aborted had we not used the treatments."

DOES THAT MEAN ANYTHING TO YOU?

Write us. $1.04 per cow.

THE U. S. LIVE STOCK REMEDY CO.
UNION STOCK YARDS DENVER, COLORADO

313 Livestock Exchange, Calgary, Alta.

Dairying and Hog Raising

All letters regarding commercial and technical features of dairy farming and hog production promptly answered. Address all communications to Dairy Department, Western Farm Life, Denver, Colorado.

Maintain the Dairy Herds.

Maintain the dairy herds and build new ones, is the substance of advice contained in an official proclamation by Governor Shoup of Colorado, issued at the request of the State Dairy Council. That both bankers and farmers are realizing the value of this suggestion is apparent in the present demand for dairy stock that comes from sections of the intermountain region where dairying has hitherto been neglected. County agents and the agricultural agents of the various railroads have many requests from groups of farmers for dairy stock. Some of this demand is being supplied by Colorado breeders, but most of the stock is coming from Wisconsin. Following is Governor Shoup's proclamation:

To The People of Colorado:

The attention of the executive has been directed to an apparent decline in the dairy interests of the state, a decline not at all warranted by conditions as they prevail throughout the state, and in these times of depression in the beef industry and in many other lines it is imperative that this matter be called to the attention of the citizenship.

The Colorado Dairy Council, deeply interested in this important subject, is authority for the following statements:

"A comparison of census returns on the number of dairy cows in Colorado during each of the past five years shows a progressive falling off in increase of herds, said decrease being greater in 1920 than in each of the four preceding years. Corn and alfalfa are cheap—far too cheap for the good of the man who raised them and is trying to sell them as such. An average dairy cow will require about 415 pounds of corn chop, 83 pounds of cottonseed meal and 2,075 pounds of alfalfa hay to produce 100 pounds of butterfat. At the present market prices, this amount of butterfat is worth $32, bringing for the feed consumed a value of $4.25 per hundred for the corn chop, as against a market price today of about $1.25 per hundred, and $12.00 per ton for the alfalfa, which has a value in the stack of from $2.00 to $5.00 per ton. In other words, the return to the dairyman for his feed is approximately trebled by feeding it to dairy cows, and such an increase is eminently desired under the unsatisfactory conditions existing today."

In view of these facts, and the further fact that the Dairy Division of the United States Department of Agriculture reports that bank deposits in dairy sections of the country are actually increasing under the adverse conditions prevailing, while deposits in non-dairying sections show a heavy falling off, and that all authorities agree that the development of animal husbandry, particularly in dairying, is vital to the maintenance of the value of our land, its producing power and its continued profit to the producer, the desirability and necessity of earnest stimulus being applied to the dairy industry in Colorado is apparent to all who are interested in aiding in the restoration of normal conditions in our state, and for these reasons I feel it my duty to call upon all farmers to pay added attention to dairy cows and upon all allied interests to give to the farmer every possible support in their endeavors to increase the dairy herds of the state.

In Witness Whereof, I have hereunto set my hand and caused to be affixed the Executive Seal, at the Capitol, in Denver, this fifth day of December, A. D. 1921.

OLIVER H. SHOUP, Governor.

Boulder County Testing Report.

There is a decided increase in the number of dairy cows being bought and milked in Boulder county as well as in other counties of the state. In fact, the milk production of the state for November is considerably above normal. This helps to account for the fact that the price of butterfat has not increased since fall. The spring drop in price may come a little earlier according to the present indications, especially should the winter continue mild.

Dairy cows continue to demand good prices at the sales and a good cow does not go begging. It can hardly be said how high the dairy cow will sell should the feeding game prove a loser this year.

Marcus Harper of Boulder had high cow for the state for October. The cow is a registered Holstein named Rose Chiron Korndyke, making 75.5 pounds of butterfat and 1,953 pounds of milk. This cow was also high cow for the association in October.

Mr. Harper has high cow for the association during November. Lady Ismay DeKol with 72.9 pounds of fat and 1,965 pounds of milk. High herd for November of herds under fifteen cows goes to Mr. Harper with a herd average of 54.5 pounds of fat and 1,520 pounds of milk for eight cows. Elmer Geer has high herd for November of herds with over fifteen cows, with an average of 28.9 pounds of fat and 642 pounds of milk for fifteen cows.

There are twenty-four more quality cows for November, as follows: Gabe Lucas has Margarite, a Guernsey with 1,340 pounds of milk and 45.3 pounds of fat. E. L. Buster has Eve, a Holstein, with 1,284 pounds of milk, 50.0 of fat. S. D. Buster has Spot, a Holstein, with 1,521 pounds milk, 42.5 of fat; Red, a Shorthorn, with 1,239 pounds of milk, 55.7 of fat. Elmer Geer has Buttercup, a Jersey, with 966 pounds of milk, 43.4 of fat. W. E. Arbuthnot has Honeydew, a Jersey, with 594 pounds of milk, 42.7 of fat. N. Anderson has two Holsteins, Johanna with 1,257 pounds of milk, 56.8 of fat; Pauline, with 1,218 of milk, 40.5 of fat. E. J. Maris has Blackie, a Jersey, with 702 pounds of milk, 40.7 of fat. Besides Lady Ismay DeKol, Marcus Harper has six Holsteins, Queen with 1,254 of milk, 51.2 of fat; Rose, 1,941 pounds of milk, 71.3 of fat; Pontiac, 1,509 pounds of milk, 42.7 of fat; Mayberry, 1,287 pounds of milk, 41.6 of fat; Daisy, 1,536 pounds of milk, 60.7 of fat; Pink, 1,956 pounds of milk, 62.4 of fat. F. R. Chapman has Queen, 1,137 pounds of milk, 44.3 of fat; France, 1,293 pounds of milk, 43.9 of fat. C. A. Rossiter, with three Holsteins, Ritje, 1,512 pounds of milk, 48.3 of fat; Maid, 1,248 pounds of milk, 44.9 of fat; Beauty, 1,209 of milk, 44.7 of fat. J. J. Kalberer has two Holsteins, Beets, 1,326 pounds of milk, 50.3 of fat; Aggie, 1,314 of milk, 49.9 of fat. George Yeager has a Holstein, Bixler, 1,080 pounds of milk, 43.2 of fat. Harry Yeager has a Holstein, Albino, 1,686 pounds of milk, 50.9 of fat. —S. G. McLain, Tester.

Cause of Bitter Milk.

I would like to know what causes buttermilk and heavy cream to have a bitter taste? At first it was not noticed in the butter, but is now. The buttermilk is too bitter to drink. They now eat millet hay and bran, drink well water in which we have not detected any unpleasant taste.—C. M., La Plata County, Colo.

Bitter milk commonly occurs with animals which have been in milk for a long period. Sometimes the bitter taste can be detected as soon as the milk is drawn, but it is more pronounced as the milk becomes older. Cows giving bitter milk should be fed liberally of green feed or silage and, if a heavy grain ration is being given, this allowance should be reduced. It is advisable also to give a cow two or three doses of epsom salts at three-day intervals, making the amount of salts given about 1½ pounds per dose.

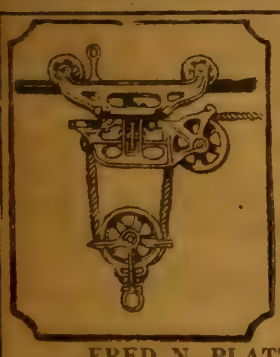
The Kingsley Herds, Minden, Neb., January 20 will offer at public sale forty head of Duroc bred sows. These sows have all been mated with the famous Kingsley herd boars and the entire offering is the same breeding as the animals that secured the sensational winnings at the Colorado and Nebraska fairs this last fall. There will be represented in this sale such noted blood lines as Sensations, Pathfinders, Orions and others. See special sale announcement in this issue.

Forty head of registered Poland China hogs will be sold at public auction by A. D. McGillvray, Boulder, Colo., January 26. Among Mr. McGillvray's offerings will be a number of daughters from his famous old herd boar, Max Giant Bob. See sale announcement in this issue.

Color Your Butter

"Dandelion Butter Color" Gives That Golden June Shade and Costs Really Nothing. Read!

Before churning add one-half teaspoonful to each gallon of cream and out of your churn comes butter of Golden June shade to bring you top prices. "Dandelion Butter Color" costs nothing because each ounce used adds ounce of weight to butter. Large bottles cost only 35 cents at drug or grocery stores. Purely vegetable, harmless, meets all State and National food laws. Used for 50 years by all large creameries. Doesn't color buttermilk. Absolutely tasteless.
Wells & Richardson Co., Burlington, Vt.



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$24.95 Upward American CREAM SEPARATOR

(Extra) Easy running, easily cleaned. Skims warm or cold milk. Different from picture which shows larger capacity machines. Get our plan of easy MONTHLY PAYMENTS and handsome free catalog. Whether dairy is large or small write today.
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(Compiled from U. S. Government statistics)

Look at this diagram!

It shows just how profitable the production of butter or butter-fat has been since 1914, and that it pays just as big today as ever.

The top line of the black area shows the price of butter, while the bottom line shows the cost of feed required to produce a pound of butter. The thickness of the black area then shows the spread between cost of feed and price of butter—or the net profit. For example, near the end of 1921, feed to produce a pound of butter cost 16.9 cents; butter sold for 45.7, leaving a difference of 28.8 cents per pound, or 170% profit.

De Laval Cream Separators have helped more than any other factor to put the butter business on such a profitable basis—by saving cream, improving butter in quality, saving time, and saving skim-milk in the best condition for feeding.

Let a De Laval start making and saving money for you now. See your De Laval agent or write for full information. Prices on pre-war basis. Sold on easy terms.

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The world's standard—over 2,500,000 in use the world over. Skims cleaner, turns easier and lasts longer than any other.

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The better way of milking — cheaper, faster and cleaner than any other way of milking. In use on thousands of dairy farms.

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Our Cows are big and growthy, with strong Record of Merit milk production that are making Pine Valley Shorthorns so popular in the Rocky Mountain West.

COWS WITH CLASS A OFFICIAL RECORDS

Victoria No. 228067	15483.7 Lbs.	Milk	569.54 Lbs.	Fat
Ury of Pine Valley No. 357533	12448.9 Lbs.	Milk	484.81 Lbs.	Fat
Blue Bell No. 228053	11940.9 Lbs.	Milk	421.95 Lbs.	Fat
Pine Valley Rose No. 228062	11072.1 Lbs.	Milk	384.31 Lbs.	Fat
Lady of Colorado No. 228054	11492.9 Lbs.	Milk	406.96 Lbs.	Fat
Snow Bird No. 228064	10920.0 Lbs.	Milk	414.86 Lbs.	Fat
White Sox No. 228069	9722.1 Lbs.	Milk	359.78 Lbs.	Fat
Lady Clay No. 173595	8378.3 Lbs.	Milk	309.68 Lbs.	Fat
Pine Valley Miranda No. 632124	8357.4 Lbs.	Milk	391.65 Lbs.	Fat
Pine Valley Fairy No. 649644	7906.9 Lbs.	Milk	275.91 Lbs.	Fat
Mariposa Lily No. 632120	6932.3 Lbs.	Milk	267.46 Lbs.	Fat
Pine Valley Lady No. 228057	7734.1 Lbs.	Milk	307.86 Lbs.	Fat
Pine Valley Myrtle No. 806298	5700.8 Lbs.	Milk	216.36 Lbs.	Fat
Mariposa Rose No. 535748	7180.8 Lbs.	Milk	295.9 Lbs.	Fat
Duchess Clay No. 791556	12318.6 Lbs.	Milk	413.94 Lbs.	Fat

WE WILL HAVE OUR SHOW HERD AT THE STOCK SHOW, AND ALSO SEVERAL YOUNG BULLS, PRICED TO SELL.

Pine Valley Dairy & Farms Co.

Seeley G. Rose, Mgr. Colorado Springs, Colo.

MILKING SHORTHORNS

Type

Consistent Show Winners. At the International this year we showed five head and won eight prizes; three firsts, two thirds, a fourth, a senior and a grand championship.

Production

During the past two years we have placed in the Record of Merit with Class A, offcial records, more cown than has any other herd in the United States.

Price Not too high for the quality. Bull calves as low as $100.00.

The Bonvue Farms Co. *Denver, Colo.*

Sixth Annual Purebred

HOLSTEIN SALE

Thursday, January 19, '22

In the Dairy Barn, Stock Show Grounds, Denver beginning at 11 o'clock A. M.

35 Females 35

8 Bulls 8

Every animal in this sale has been inspected and passed on for individuality and production records by the sales manager and committee. They will meet the most exacting qualifications of the most critical breeder.

They are the pick of Colorado herds

The Records

All cows and heifers that are in calf are bred to bulls from dams with over 30-pound records, some to yearly record bulls, and some going as high as 44 pound seven-day records.

Several cows with records better than 25 pounds are included.

Over half the cows have A. R. O. records on them.

The Consignors

James Gibson, Morrison; Lee Gaiser, Denver; John Kramer, Brighton; Spencer Penrose, Colorado Springs; American Beet Sugar Co., Rocky Ford; J. A. McCloy, Aurora; Norman D'Arcy, Parker; W. G. Foster, Englewood; Willow Springs Farm, Morrison; Donley & Hansen, Morrison; Ben F. Simpson, Denver; Hall Bros., Denver; Mrs. R. G. Douglass, Rush, Colo.

Under the auspices of and guaranteed by the Colorado Holstein Club and the Stock Show Association

For Catalogs, write

K. A. McCASKILL, Sales Manager
1820 Curtis Street, Denver, Colo.

Mrs. R. G. DOUGLAS, President.

BRED SOW SALE

40 Head Purebred Durocs

Friday, January 20th, 1922

This offering consists of 40 head of tried sows and fall and spring gilts. With one or two exceptions, the entire offering consists of individuals that are our own mating. Sired by either Victory, High Pathfinder, Great Uneeda Sensation 2nd, or by Giant. About twenty are bred to Giant for early March litters.

The entire offering at this sale are the same breeding that swept the boards at the Colorado State Fair last fall and made such sensational winnings at the Nebraska Fair. A number of the winning animals will be driven through the ring and should produce litters that, like their ancestors, will make show ring history.

The offering consists of *Sensations, Pathfinders, Orions* and other noted blood lines

WRITE FOR CATALOGUE.

The Kingsley Herd, Minden, Neb.

Best of facilities in getting to and from sale, as Minden is on main line of C., B. & Q. from Denver to Chicago.

CRUISE & OLSON, Auctioneers. E. B. TROUGH, Clerk.

J. Mortimer Pugh DUROCS

I am planning on showing at the National Western my Sensation hogs out of Blue Ribbon Sensation and Alfalfa Queen, for which I paid $490.

ALFALFA SENSATION
My herd sire, won 2nd at Rocky Ford and 3rd at Colorado State Fair (Pueblo) 1921.

J. M. P.'S SENSATION
Won 1st as senior pig boar at Rocky Ford, 1920.

ALFALFA QUEEN'S SENSATION
Won 2nd last year and 3rd this year in senior sow pig and senior yearling sow class; 5th place on litter of four futurity at Rocky Ford, 1921.

HIGHPOCKETS
is a promising young boar, sired by Illustrator's Chief. A litter sister won first in Boys' Pig Club in competition with eight others.

If you attend the National Western Stock Show look up my herd. I will be pleased to have a talk with you. I have for sale sows and gilts due to farrow in March. I also have several outstanding young boars for sale. If you do not plan on being at the Stock Show, write me your wants.

MY HOGS ARE PRICED TO SELL.

J. Mortimer Pugh, Fowler, Colo.

Hampshire Hogs

The Kings and Queens of Hogdom

For four years in succession, beginning in 1918 and including 1921, the Hampshire hogs have WON THE GRAND CHAMPION PRIZE OVER ALL BREEDS in car loads of fat hogs at the greatest of all shows, the Chicago International. At the recent International show there were eighteen car loads of fat hogs shown, representing all the leading breeds. The Hampshires won first and second Grand Champion Prize. The Grand Champions were March pigs and weighed 264 pounds, and sold for $11.35 per hundred at auction, purchased by Armour & Company. Their nearest competitors were a car of Berkshires selling for $7.85 per hundred, or a difference of $3.50 per hundred in favor of the Hampshires. Here is a record that has never been attained by any other breed of hogs and is conclusive evidence that the Hampshires are what the packers want—a meat hog, not the lard type, and are willing to pay a premium for them.

On the Cloverdale Ranch, Hugo, Colo., can be found about 300 head of kings and queens of hogdom representing the very choicest strains of blood to be found in the Hampshire records. The herd boars now in service are Lookout Superb 47091, as close as can be had, combining the blood of Lookout and Wickware. Mosher's Wickware 93955, a son of Lieutenant Wickware, Mr. Silvers' great show and breeding boar. Hugo Chief 91121 is a Tipton bred boar being sired by the Grand Champion Tipton's Lad. Wickware Boy 74355, sired by another of Mr. Silvers' great show boars, Wickware Favorite. These are the four Kings that would be hard to duplicate in any herd in the West.

The Queens—for want of space we will only mention a few: Ethel Lookout 238678, 1st prize winner, Maryland State Fair, has a fine litter by Lookout Superb. Roxy Lookout Again 239676, Colorado State Fair winner, has a fine litter by Lookout Superb. The above sows were sired by Lookout Lad 20371, the first Hampshire boar to sell for $5,000, and the owner claims to have sold over $80,000 from the get of this boar and sows bred to him.

Perfecto's Lady 206[illegible], won 2nd prize at Colorado State Fair when suckling eight pigs sired by General Wickware. Perfecto's Lady was sired by Lookout Perfecto, a champion, and sold for $2,000, while her dam, Miss Exalted King 135838, sold for $1,000. Her litter of eight pigs by General Wickware 26879, conceded to be the King of Hampshire Hogs, are bred in the purple. Georgia Lookout 220702, a prize winner in Southern Show circuit, sired by the show boar Lookout Commander 80639. She has a litter by the show boar Ring Master 85075; and many others like the above.

If in need of a pig with the bluest of blue blood for a herd boar, or anything in the Hampshire line, from a pig to a foundation herd, call or address,

N. E. MOSHER & SON, HUGO, COLO.

THE ANNUAL

HEREFORD SALE

WILL BE HELD IN THE STEAM-HEATED PAVILION

Wednesday, January 18, 1922

NATIONAL WESTERN STOCK SHOW WEEK

Sale Starts Promptly at 1 o'clock P. M.

The sale offerings this year will consist of fifty head, carefully selected from the West's most prominent breeders. Colorado Herefords have shown strong in dozens of fairs and shows during the past year and some choice individuals from these show herds will be in this sale.

THEY ARE WESTERN BRED AND WILL MAKE GOOD ANYWHERE.

For Catalogs write: John E. Painter, Secretary, Roggen, Colo.; Western Farm Life, 1518 Court Place, Denver, Colo.; Fred P. Johnson, 1820 Curtis Street, Denver, Colo.

HOLSTEINS.

Only One Bull Left

Just one bull of serviceable age is left for sale in our herd. His dam made 15 pounds of butter as a yearling and will be tested for year's work this fall. She is a wonderful milker and the daughter of a 4-year-old with a year record of 25,208 pounds of milk and 878 pounds of butter, while the granddam of the bull's dam milked 108 pounds of milk in one day and 3,100 in 30 days. Two direct generations of 100 pound cows back of him. He is a good individual, mostly white, and sired by Denver Sir Segis, a 30-pound son of our senior herd sire, Johan Duchess De Kol Lad. What will this bull be worth to some good breeder?

Sanborn Meadows Holsteins.
MRS. R. G. DOUGLAS,
Rush P. O., Colo.

4 Registered Holstein Bulls

FOR SALE—One 3-year-old; three 2-year olds. Three are direct descendants of Pontiac Korndyke 25982, and the fourth carries Dirkie, DeKol, Aaggie and Nemea strains. For further information address

THE NILES FARMS,
706 Kittredge Bldg. Denver, Colo.

We have bred hundreds of prize-winning and high-producing Holstein cows, including

Tilly Alcartra

We can supply you with that same line of breeding. Write

McKAY BROS., Caddoa, Colo.

WALLIE FARM REGISTERED HOLSTEINS,
4800 S. Penn, Denver. W. G. Foster, Owner
Home of "Colorado Count," whose 29 sisters broke 140 world's records.

Bulls of Serviceable Age for Sale

Excellent individuals. World's record blood. Terms to responsible buyers. Wallie Farm bulls are guaranteed.

Buy a Calf Out of This Herd

Twenty cows in this herd on an official seven-day test averaged 446.13 lbs. of milk and 20.19 lbs. of butter.

COLORADO STATE HOME,
2305 S. Wash. St. Denver, Colo.

D'ARCY HOLSTEINS

Have made good at home and they will do the same for you. A few choice calves can be purchased now at a price that can't help but make you money. Write

NORMAN R. D'ARCY
Parker, Colo.

PRODUCTION — TYPE — SIZE — BREEDING

We offer you a wonderful amount of these Holstein qualities—and from a clean herd. Bull calves from fine record dams. Pahgre Valley Ranch, Loesch Bros., Montrose, Colo.

GREAT BARGAINS, 960 HEAD HEREFORDS, SHORTHORNS, ABERDEEN ANGUS
1, 2, 3, 4 and 5 years old. Cows, heifers and bulls. Prices $75 to $120 and up. 360 Percheron and Belgian horses, stallions, mares and colts, 1 to 6 years old. Prices $125 and up per head. One head or a carlot. Breeding guarantees with each. Registered pedigrees by mail. Stock on twenty farms in Iowa and Illinois. Write for circular and particulars. Address ILLINOIS HORSE & CATTLE CO., Good Block. Des Moines, Iowa.

GUERNSEYS.

GUERNSEYS

Sired by the Grand Champion bull at the 1921 National Western and State Fair, both male and female, are for sale. Write

H. D. PARKER
GREELEY, COLO.

JERSEYS.

A. M. McClenahan
Jersey Cattle
Duroc Hogs

GREELEY, COLO.

MILKING SHORTHORNS.

OUR BARN IS FULL OF

Record of Merit Cows

We'll sell you a few or we'll sell you their sons and daughters.

REAL MILKING SHORTHORNS
Pay their way as they grow.

Come see us any time. We want to show you a herd of big beefy cows that are proving their dual purpose ability. All on official test.

VISIT US AT

Wonderview Farm

W. C. TEGTMEYER & SON.
Just west of Crown Hill Cemetery,
32nd AND HOWELL.
Mail Address, Box 741A, Edgewater, Colo., R. 1

J.B. Benedict, Littleton, Colo.
Milking Shorthorns

BULL and HEIFER CALVES from Record of Merit dams, sired by Royal Glenside, a pure Bates bull out of a Record of Merit dam. Milk records established last year above 14,728 lbs. Two-year-old milking 42 lbs. per day, 1,300 lbs. per month, with first calf. Each cow tested in our herd last year went over 10,000 pounds. The calves from these cows are offered for sale at farmers' prices.

INSPECTION INVITED.

MacHurst
MILKING SHORTHORNS

Herd sire, Major Oxford 3rd.
HERD AVERAGE 1920-21:
319.1 LBS. BUTTERFAT.
J. P. McINROY, LARKSPUR, COLO.

Buy MILKING SHORTHORNS

from the oldest established herd in the state. We can supply your needs in bulls of beef type either horned or polled Shorthorns.

Write Superintendent for folder on breeding and prices.

State Industrial School,
Golden, Colo.

Bates Shorthorns

are the foundation blood of true Milking Shorthorns. We have them. A few bulls for sale.

THE CARPENTER CATTLE CO.
GREELEY, COLORADO

HEREFORDS.

THE MARKET LOOKS PROMISING.
RESTOCK NOW WITH

HEREFORDS

Some choice heifer calves and a few bulls of Beau Santos and Bright Stanway breeding are for sale.

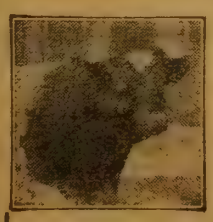
J. D. Craighead, La Junta, Colo.

D. S. Polled Herefords

Cows from Polled Plato, herd headed by POLLED SUCCESS A 3rd. Young bulls and heifers for sale.

Smith Livestock Co.
CHIVINGTON, COLO.

SHORTHORNS.



THIS IS THE TIME

You can treble and quadruple the value of your corn and forage by feeding it to Shorthorn cattle—and enrich your soil at the same time. Better buy good Shorthorns while the price is low.

PUREBREDS PAY THE BEST.

AMERICAN SHORTHORN BREEDERS' ASS'N
13 Dexter Park Ave. Chicago, Ill.

SHADELAND STOCK FARM

BREEDERS OF
SHORTHORN CATTLE

Herd headed by Maxwalton Rustler, a grandson of Avondale.

Chester White hogs of best breeding stock for sale. Also Ringlet Barred Rock eggs for hatching. G. W. BALL & SONS, Pierce, Colo.

WHEN WRITING
LIVESTOCK ADVERTISERS
PLEASE MENTION
WESTERN FARM LIFE.
(Both Publisher and Advertiser Will Appreciate It.)

COME TO THIS SALE
40 Head Reg. Poland China Hogs--40
Thursday, January 26, 1922

They will carry litters by Max Avalanche and Max Buster, choice daughters of Max Giant Bob mated to these boars will be attractions.

We will also sell TWO SHORTHORN BULLS of the best blood lines.

SALE ON MY FARM, FIVE MILES EAST OF BOULDER, COLO., ON ARAPAHOE ROAD.

Write for Catalog.

Col. H. C. Buchanan, Auctioneer. 1904 Logan, Denver, Colo.
A. D. McGILLVRAY, Owner, Route 1, Boulder, Colo.

PRIZE WINNERS

See Us at the STOCK SHOW

Shorthorns, Herefords, Guernseys, Holsteins, Jerseys, Poland Chinas, Duroc Jerseys, Including Grand Champion Poland China Boar.

Colorado Agricultural College, Ft. Collins, Colo.

Buy Your Foundation Now

in Purebred Livestock from a big organization that spares no money to buy the best and specializes on purebred registered

Herefords ***Percherons***
Holsteins ***Duroc-Jerseys***

Breeding stock of all ages for sale. Individual or carload lots.

MYRON STRATTON HOME FARMS,
James J. Gauld, Supt. COLORADO SPRINGS, COLO.

General B.

DUROCS. DUROCS.

The War Is Over—You can buy registered Durocs at

PRE-WAR PRICES

from the herd that won more blue and purple ribbons at the recent State Fair than any other herd. Thirty herds competing. We won 27 ribbons, including grand champion sow, 12 firsts and champions. More animals of Blue Ribbon Sensation blood were represented in the winnings than those of any other sire.

Buy one or a carload from

Blue Ribbon Live Stock Co.
C. F. Burke, Mgr. PUEBLO, COLO.

SPRING BOARS

Just a few real herd headers left ready to go at pre-war prices. Used with grade sows even, they will more than pay for themselves on the first crop of pigs. Write today.

C. C. Boyd, Yuma, Colo.
Livestock Auctioneer and Duroc Breeder.

DUROCS

Gilts bred to my champion boars and June pigs from my great yearling "Golden Chief" and a daughter of the World's Grand Champion, Great Orion Sensation, can be seen at the Stock Show.

J. W. Brauer,
22 Lorraine St., Colorado Springs, Colo.

Big Type Registered Duroc Jersey Bred Sows

From $5,000 sires of Pathfinder, Crimson Colonel, Kerns Sensation, Critic Sensation, Defender, Victor, Gold Model and Illustrator families. Our culls made 250 pounds at 4½ months this season. Sows for sale at farmers' prices if taken now.

E. W. BROWN, MITCHELL, NEBR.

HAMPSHIRES AND POLAND CHINAS

Mather's Big-Type Polands

sold to breeders in four states this year are giving satisfaction.

BUY WEANLING PIGS
at prices that will surprise you.

C. J. Mather, Longmont, Colo.

PUREBRED
Hampshires

by Grand Champion sires and dams. Breeding stock for sale.

DeKalb's King 160th.

C. S. BRATT & SON, ARAPAHOE, NEB.

CHOICE BIG-TYPE POLAND CHINA PIGS

Either sex, sired by Pilot Jumbo and Yankee Lad, dams Big Giantess, Miss Imperial, and F. B.'s Big Lady.

English Barron White Leghorn Cockerels and Mammoth Bronze Turkeys.

F. B. MORGER, FOWLER, COLO.
R. F. D. No. 1, Box 18.

SHORTHORNS.

SUNNYSIDE ROBERT
SHORTHORNS

We have for sale cows, and cows with calves by side, and heifers. Scotch and Scotch tops. A few choice bulls left. We make 'em make good. Write us.

GLEASON & BLAZER, Kiowa, Colo

SHORTHORN BULL FOR SALE.
ADVOCATES URR, roan, calved Sept., 1919. Bred by H. F. Harmon. Sire, Imp. Advocates Model 647679. Dam, Maid Marian 138815; sire, Gladstone 239313. Dam, Merry Maid 2d 295285; dam, Nonpareil Victor 2d 238255. Dam, Merry Maid 72d: sire, Marsh Knight 188105. Dam, Imp. Winsome Maid; sire, Marchison 192330.
H. F. HARMON, BOULDER, COLO.

We raise ***SHORTHORNS***
For Both Beef and Milk.
"The Farmer's Cow"
We have never used a nurse cow on our place.
The CORNFORTH LIVESTOCK Co.
ELBERT, COLO.

Imp. Villager's Blood

will breed Scotch quality into your herd. Buy his grandsons and granddaughters, bred and raised in Colorado at 7,500 feet. You will be surprised at the reasonable price on these choice youngsters. Write us.

I. J. NOE & SON, Greenland, Colo.

This is the longest Department Store Direct Main Aisle in the United States. Doubt of this fact on the part of Eastern trade papers lead to an investigation and final admission that it is true. One New York store is exactly the same length, but it has no aisle leading through from end to end.

Stockmen and Ranchmen

When at the Stock Show, see the booth representing our complete lines in

Heiser Saddles and Harness, Justin's World-Famous Boots, Tietzel and Denver Special Boots, Kelly Spurs, Stetson's Western Hats, Sweet Orr Trousers, Etc., Etc.

LINES ARE FULL AND

Prices Are Right

If you are not coming to the show

Send for Our Catalog of Stockmens' Supplies

REMEMBER OUR

$2,500,000 worth of Quality Merchandise, embracing everything for wear and for complete house-furnishing.

If you cannot come to the store, write us. We can surely meet any requirement in good merchandise. There is absolutely no risk in ordering from The Denver, as no sale is completed until you are satisfied with quality, style, and price.

WE PREPAY

your purchases anywhere, excepting in FURNITURE, LINOLEUM AND MATTRESSES.

Come to the Stock Show

and make yourself comfortable at The Denver. You are welcome to our many public conveniences and their use places you under no obligation whatever.

THE DENVER DRY GOODS CO

State Farm Bureau After Ten Thousand Members

(Continued from Page 3.)

adopted at the Fort Collins meeting state:

"The Farm Bureau is not antagonistic to any existing farm organization. It is rather a service bureau for the use or benefit of individual farmers and all farm organizations. Its purpose is to fill any gaps left by existing organizations, and to unify and foster, regardless of source, those things that will serve the highest interests of agriculture. It is highly important that this interpretation of the mutual relationship between the Farm Bureau and kindred farmers' organizations be given the widest publicity."

The election of officers resulted as follows: J. D. Pancake, Loveland, president; F. R. Lamb, Penrose, vice president and secretary; J. M. Rodgers, Wellington, national representative; E. R. Bliss, Greeley, and Henry Lowell, Castle Rock, executive committee members.

That it is necessary to organize the [illegible] farm bureau along departmental [illegible] was brought out in a report on [illegible] buying of feeder cattle by the [illegible] Farm Bureau Federation, acting [illegible] the State Farm Bureau, the purchases being made directly from rangemen. There was no organization within the farm bureau to handle the matter, but Secretary Lamb took it up on his own initiative and succeeded in lining up livestock growers' associations, individual producers and county agents, so that good service was rendered the buying committee sent here by the Ohio Farm Bureau. Over 5,000 head of feeder cattle were bought and the purchases were so satisfactory that the Ohio people decided to come back next fall to buy more cattle on this plan. This demonstration of direct cooperative marketing found favor with the state farm bureau convention and resulted in the adoption of a strong resolution approving it. This resolution closed with the sentence.

"The sidestepping of such issues will result in stagnation for our organization."

The resolution endorsed the movement, stating that it resulted in elimination of yardage charges and expensive and harmful handling. It recommended the establishment of machinery by the Colorado State Farm Bureau to furnish the required service to eastern feeders for direct buying.

A report on national legislation and on the national convention of the American Farm Bureau Federation was given by Mr. Jamison and Mr. Rodgers, following which Mrs. Rodgers spoke on the work of the women as developed at the Atlanta meeting.

When a girl begins calling you by your first name, watch out, boy! She likes your last one.—Judge.

Remember the Shorthorn Cattle Sale

Wednesday A. M., January 18

At the WESTERN STOCK SHOW, Denver

American Shorthorn Breeders' Association, Chicago

Would Saddle an Extra Tax on the Farmer—Page 9

UNIVERSITY OF

WESTERN Farm Life

Vol. XXIV. *Denver, Colorado, January 15, 1922.* *Semi-Monthly*

MILK MEANS MORE MONEY FOR FARMERS. (See Article Page 3.)

Ship furs

—if you have not yet shipped to Fouke

to

Split your next shipment, skin for skin, grade for grade, send one half to the house you've been shipping to, and the other half to Fouke at once. You will get more money for the half you ship to Fouke, you can bet your bottom dollar on that.

(We believe that we are paying fur shippers 20% to 25% more for furs than any other house in the country. We want you for a regular shipper.)

FOUKE FUR CO.

383 FOUKE BUILDING

ST. LOUIS, MO.

Western Canada Offers Health and Wealth

and has brought contentment and happiness to thousands of home seekers and their families who have settled on her FREE homesteads or bought land at attractive prices. They have established their own homes and secured prosperity and independence.

In the great grain-growing sections of the prairie provinces there is still to be had **on easy terms**

Fertile Land at $15 to $30 an Acre

—land similar to that which through many years **has yielded from 20 to 45 bushels of wheat to the acre**—oats, barley and flax also in great abundance, while **raising horses, cattle, sheep and hogs** is equally profitable. Hundreds of farmers in Western Canada have raised crops in a single season worth more than the whole cost of their land. Healthful climate, good neighbors, churches, schools, rural telephone, excellent markets and shipping facilities. The climate and soil offer inducements for almost every branch of agriculture. The advantages for

Dairying, Mixed Farming and Stock Raising

make a tremendous appeal to industrious settlers wishing to improve their circumstances.

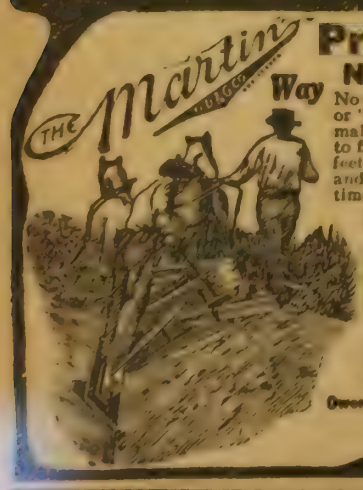
For illustrated literature, maps, description of farm opportunities in Manitoba, Saskatchewan, Alberta and British Columbia, reduced railway rates, etc., write

K. HADDELAND,
Great Falls, Mont.
Park Hotel, 104 Central Avenue.

Authorized Agent, Dept. of Immigration and Colonization, Dominion of Canada

160 ACRE FARMS IN WESTERN CANADA FREE

CUT DITCHING COST



THE Martin WAY

Prices Slashed

No More Shoveling!

No more plows, slips, fresnos, or "go-devils." The MARTIN makes the ditch from start to finish, any depth, up to 4 feet. It cleans old weed-grown and silt-filled ditches in jig time.

For Irrigation or Drainage

For small laterals or big ditches; for terracing, rice levees, alfalfa checks and borders and for road building. The MARTIN does the job.

For Horse or Tractor Use

This all-steel, adjustable and reversible implement is made in four sizes. It is sold in every state. Write today for big free catalog.

Owensboro Ditcher & Grader Co., Mfrs., Box 909 Owensboro, Ky.

Stock Carried at Denver, Colo.

Distributors in All Western States

DO YOU WANT TO BUY LIVESTOCK? If you don't find what you want advertised, write your wants to the Breeders Dep't ment, Western Farm Life.

Proper Handling of Soil.

Excessive aeration of the soil may be injurious in causing a serious waste of moisture, especially in arid climates when the hot, dry winds may readily destroy the germinating power of the swollen seed when the seed bed is too loose and open, and later may injure and destroy the feeding roots.

The abundant growth of grain often seen in the tracks of a wagon carrying the centrifugal sower, when the stand in the general surface is very scanty, is usually due to the consolidation of the seed bed and suggests at once the well-known efficacy of light rolling to insure quicker germination and a better stand. Similarly, the rolling of grain fields in spring is often the saving clause for a crop in dry years. But such needful consolidation must not, of course, be carried to the extent of creating a surface crust which would subsequently serve to waste the subsoil moisture. Hence, the soil surface should be rather dry when rolling is resorted to.

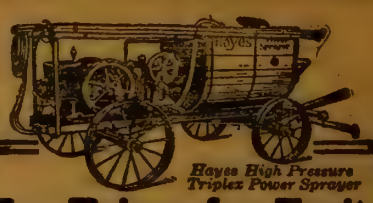
The pressing of the earth around transplanted plants similarly is a needful precaution not only with respect to the drying out of the soil, but also to insure close contact between roots and the soil.

The above is from Prof. E. W. Hilgard's book on "Soils." It seems to me that when such a noted authority points out what excessive aeration may and I believe does do to fall sown wheat in semi-arid states, we should be more careful and pay more attention to our fall sowing. It is a fact that too poor stands of our winter grain sowing is the rule and many do not know why. Many are prejudiced against press wheels with their drills and prefer this and that drill really without knowing or having any real good reason. There is no doubt that we often forget when we come to a new state that climatic conditions are sometimes very different from those existing where we came from, and to be successful in a new state or country requires new methods of farming.

Pressure of the soil around our newly sown grain causes quicker germination, keeps excessive air out and keeps the air warmer around the plant in cold weather, besides giving a more perfect stand of growing grain. It is a fact, however, that after using a press wheel drill (or even a light roller after sowing) that should a rain come, a crust forms and the young plantlet curls under the crust and in many cases dies. But my observations have shown me that the crust is not always to blame, as fall sown wheat curls when there is no crust. Why? I am of the opinion that in some fall seasons the seed germinates very rapidly, grows too fast and has not enough vitality to push its way through the surface soil. Anyway the press wheel drill or the application of a light roller should not bear all the blame of our plants curling. It is certain that you can prevent excessive aeration which in this climate (Colorado) and other semi-arid states is very detrimental to a good stand of grain. We are confronted with two propositions whereby we can secure a perfect stand. We can run a sharp-tooth light drag harrow over a crust if we have such an implement, or roll our ground (an extra operation and more work) and through our soil drying out through not being compacted and we get only a poor stand, we must and often do re-seed. So it is up to the progressive farmer to really give some thought to this important subject. If he will only sit down and figure this important problem out and get in his mind's eye the action which goes on in his soil through this work, he will probably pay more attention to what he does and why.

Big crops are just as easy to raise as poor ones and they require more study and more work, but they are the only ones that pay. If any one has better reasons to offer as to why grain curls under a crust, or when there is no crust, please let us have them.

The past fall was very dry and in many parts of Colorado there is little if any moisture in our ground. Under such circumstances and considering the fact that we may not get moisture at the right time for our 1922 crops, would it not be well to recognize the great importance of whatever work we do and do it extra well? Shallow plowed land will not absorb rains or hold moisture that comes in a hurry. Fairly deep plowing must not be left loose. It should be compacted when the surface is fairly dry with a weighted disk harrow set straight. Land should not be plowed in the spring when wet. Do not work it when it is wet. It will pay to thoroughly disk all land before plowing. The man who does good work the coming season will have two chances in his favor—one if the season is dry and another if the season is a favorable one, in getting better and bigger crops. Put more thorough work on less land.—Dr. V. T. Cooke, Strasburg, Colo.



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Western Farm Life

A Western Magazine for Western Farmers and Stockmen

VOL. XXIV. DENVER, COLORADO, JANUARY 15, 1922. No. 2.

The Herdsman's Part in World-Beating Winnings

A MODEST YOUNG MAN'S ACHIEVEMENT AT THE INTERNATIONAL.

ALVIN T. STEINEL.

Bob Broad, the herdsman behind the grand champion boar.

SOMEONE gifted with a sense of fairness wrote a short article for The Breeder's Gazette in connection with reports on the 1921 International Livestock Show, headed "Herdsmen, Shepherds and Grooms," paying just tribute to the men behind the prize-winning animals who did the actual work, but who are often forgotten when the laurel wreaths are hung. That little article is the inspiration for this story about a great achievement for which a very modest young man deserves a share of the credit.

Colorado Agricultural College went down to Chicago in December with herds of Poland China and Duroc hogs. The Animal Husbandry department, under the splendid leadership of Prof. George E. Morton, had been winning at the National Western and at our own state fairs in hogs as well as in other classes of purebred stock. Agricultural colleges are expected to keep abreast of the times in the development of their breeding herds; they should lead and give individual breeders a run for the money in the shows. Some may criticize this viewpoint and argue that the colleges have all the advantage in money and equipment, but that is not true, especially of our western institutions. Colorado Agricultural College has been working under a financial handicap for years and the outstanding animals that have been developed are the result of careful management, good breeding practice and a knowledge of fundamentals of the breeding art that is unusual. For these things the state has Prof. Morton to thank. But that is another story.

For the present let us get back to the Chicago International, where Colorado Agricultural College astonished the hog division by winning grand championship on Poland China boar, reserve championship on Poland China sow, and other notable awards, listed in detail below. The College has been given its credit in the leading agricultural journals of America. Now getting back to "Herdsmen, Shepherds and Grooms," whose genius was it that put the hogs in shape for the purple?

A few years ago there lived in Golden, the son of a widowed mother, by name Bob Broad. College extension workers lecturing on the value of purebred swine gave him an idea. He had been raising hogs on the home farm, but somehow he saw possibilities in the purebred game that gave him a new slant on farming. He bought a purebred gilt and she brought forth a litter that had everything the college professor had declared to be essential. Bob took them to the State fair at Pueblo—and astonished himself as well as the older breeders by taking first prize on sow and litter. Then someone came forth and offered to back him in going to the National Western show at Denver. He went and won again.

It was there that a sow of his breeding attracted the attention of Prof. Morton and he bought her for the college herd. She was Lady Look Second, and upon this foundation has been built the herd from which America's latest grand champion boar has come. The acquaintance formed at that time between Bob Broad and Prof. Morton resulted in the employment of the young man as swine herdsman for the college. In time he became chief herdsman. The stuff was in him. He had love of the work and a talent for mating, caring and feeding hogs that was recognized by the head of the animal husbandry department as unusual. Encouraged by Prof. Morton's personal interest and suggestions Bob Broad went after his job so enthusiastically that, in 1921 at the National Western show, he pulled down 54 awards on 33 head of swine. Later at the State fair he brought home 80 awards on the 44 head entered. With these ribbons in his hand he went to Prof. Morton and told him he wanted to go to the International, for he knew he could win. There was some hesitancy about financing the trip. Funds were low, but Bob Broad said: "If the college can't pay it all, I'll make up the difference. I know I can make good at Chicago."

Again enthusiasm won and President Lory approved the recommendation. Now the world knows that the young man was right. He had the stuff in his herd; he knew he had it, and he had the stuff in himself to bring out quality and type before the world's greatest swine judges. Here is the result:

International grand champion Poland China boar.

International reserve grand champion Poland China boar.

International reserve grand champion Poland China sow.

International senior champion Poland China boar.

International junior champion Poland China boar.

International junior champion Poland China sow.

First heavy carcass over all breeds on Duroc Jersey barrow.

Also the following on both Polands and Durocs: Ten first premiums, three seconds, two thirds, eleven fourths, three fifths, one seventh; silver cup for best four Poland China spring pigs.

It was a worth while job for a young man and it doesn't take a prophet to foresee that stories on "Herdsmen, Shepherds and Grooms" will not have to be written about Bob Broad many times. He is headed for the top. Good luck to him!

Banks Finance Another Shipment of Dairy Cows

MILK MEANS MORE MONEY FOR FARMERS OF LARIMER COUNTY.

FIVE carloads of Holsteins were recently brought into Larimer county from Wisconsin by eighteen farmers, most of whom are just starting dairying. Co-operation between bankers, the Larimer County Farm Bureau and the agricultural department of the Colorado & Southern railway, brought about this importation of cattle that will result in immediate increase in farm earnings, in the economical use of roughage and by-products on these farms and in permanent soil improvement through the application of manure.

A meeting of representatives of the banks of Wellington, Fort Collins and Loveland was held in November at County Agent Bascom's office in Fort Collins to discuss plans for securing cows and the financing of farmers along dairy lines. Fifteen were present, including Director of Extension McCann, Prof. Geo. E. Morton of the Animal Husbandry Department, Colorado Agricultural College, and Earle G. Reed, Agricultural Agent, Colorado & Southern railway. It was unanimously agreed among the bankers present that each bank would finance its customers for dairy cows according to the ability of the farmer to properly feed and care for cows. The county agent was to act as adviser to the banks with reference to the ability of the farmers to care for and properly feed cows.

Orders were received for 142 head. County Agent Bascom accompanied Earle G. Reed, Agricultural Agent of the Colorado & Southern railway, to the north central part of Wisconsin to purchase the cows. This locality is one of the best dairy sections of Wisconsin. Mr. Reed had during the past three years purchased forty-seven carloads of dairy cattle in this section, which had in nearly every case proven entirely satisfactory.

Altogether 48 cows, 35 yearlings and calves and one bull were purchased for ten farmers in the vicinity of Wellington. Twenty-five head of cows, 33 yearlings and 2 bulls were purchased for eight farmers in the vicinity of Fort Collins.

All of the stock was personally selected. The farms visited to purchase these animals were only those where high grade herds were kept and where purebred sires had been used for five to thirty years. In no case was an animal purchased from a herd having a scrub or grade sire at the head. Animals were all inspected and tuberculin tested by a competent veterinarian who is recognized and approved by the state authorities.

Some of the cows came from herds that are now in cow testing associations. Some herds had previously been in testing associations, while some were selected from good herds that had never been in testing associations.

The average cost of the cows in Wisconsin was $85 per head. The cost of delivery to Fort Collins and Wellington averaged about $16 per head. This includes the tuberculin test, caretaker's expenses in addition to the expense of the county agent going after the cows, barn rent, feed and bedding, a halter for each animal and insurance for thirty days at full delivered value against death from any cause; also freight and feed en route. Discussing the purchase, Mr. Reed said:

"It required 9 days of driving and visiting farms to select the 142 head. After the first three days, however, we averaged better than twenty head a day. We had the services of a man who knows the country for miles in every direction, knows practically every farmer and what kind of a herd he has, and also drives a good car that can get over the country rapidly. Without the services of such a person, the man buying cows would be lost and his expense of purchasing would run up to $20 to $25 per head.

"In addition, we had the assistance and services of two county agents, farm agents of two local banks, the secretaries of two breed associations, and the leading Holstein and Guernsey breeders. The breeders, breed associations and farmers generally of these localities realize that they must develop an avenue for the disposal of their surplus stock. They must give value received and realize that it pays them better to sell an inferior cow to the butcher for less money than to risk their reputation and that of their community on the sale of anything but good cows to western buyers who will be continual customers.

"Every farmer receiving cows in this shipment has reported with entire satisfaction thus far. It is not expected that the animals thus brought into the state will do their best, or even normal production at first. The long hard trip of 6½ days with only three feeds en route, the change of feed and water and different housing conditions, all tend to reduce the normal production of the cow that freshens soon after arrival. Those that do not freshen for thirty to sixty days after their arrival have time to get back on their feet, put some flesh on their backs, which in turn is put back into the milk pail.

"Becoming acclimated has little to do with the production of the cows which are shipped in from Wisconsin. If the cows could be put under exactly the same conditions upon arrival in Colorado as they left in Wisconsin and allowed thirty days rest before freshening, they would produce equally as well here regardless of the change of altitude and climate. Many of the Colorado farmers who get these cows are just beginning as dairy farmers and therefore do not have as good warm barns as these cows came from, nor do they feed as good a grain ration in addition to alfalfa hay and silage."

Soil Solution and Its Relation to Plant Growth

PLANT LIFE DRAWS SUSTENANCE FROM SOLUTION AND NOT FROM SOIL.

E. R. PARSONS.

WHEN dry vegetable matter is burned it leaves an ash composed of mineral matter. The rest of the matter is converted mostly into carbonic acid gas and goes back into the atmosphere where it came from. The amount of this ash differs according to the plant which provided it. It varies all the way from 2 to 9 per cent. If we strike an average at 6 per cent, then vegetable matter is composed of 94 per cent carbon compounds and 6 per cent mineral matter. These carbon compounds are supposed to be obtained almost entirely from the air in form of carbonic acid gas, also called carbon dioxide or CO2. This gas is not at all abundant in the atmosphere supposed to be only 1/2500; but a much larger proportion is found to exist over agricultural soil and especially cultivated row crops. It comes, of course, from decaying humus, and it has been pointed out that although cultivation destroys some of the humus it also fills the air with carbonic acid gas which the plants absorb through the leaves, and all row crops and well cultivated orchards usually possess that beautiful rich glossy appearance as to their foliage which comes only from a plentiful supply of CO2. A German scientist calls it fertilizing the air. Although the plant as we have seen is mainly carbonaceous, yet the mineral matter obtained from the soil, though small, a right amount of it is absolutely indispensable for plant metabolism, or as we might call it, digestion. As a man could not live and thrive without the digestive juices, so a plant could not grow without this mineral matter found in its ashes and derived from the soil. It is the possession of such mineral plant food in sufficient quantities in its soil solution which makes a soil fertile.

The mineral matter found in the soil solution and in the plant are salts or compounds of iron, lime, magnesia, soda, potash, phosphorous, sulphuric acid, silica, chlorine, and nitrites; the nitrites being acquired from humus or decaying organic matter, and furnishing the protein in the plant with the requisite nitrogen. This protein is the basis of all cell life, being the principal constituent of the protoplasm without which no organism can exist; therefore, nitrites and nitrates are the most powerful stimulants of plant growth and on this account have a high fertilizing value. In agricultural parlance, the soil solution is the water containing mineral matter, etc., which is absorbed from the soil by the plant, but speaking broadly all water except distilled water and rain water is a soil solution of sorts for lake and river water, spring water and irrigating water all contain more or less of the same elements taken up when percolating through the soil or running over it. The human race, like the plants, has flourished on soil solutions for thousands of years, and for a good reason. These mineral elements are needed in the building process of a healthy body; but when organic matter or nitrites are found in the water, we term it impure, for these help to create a favorable environment for disease germs and poisonous bacteria. We obtain our nitrogen or protein from eating meat, and our calories (or heat and energy) from the carbon compounds of both vegetable foods and animal fats.

How Plants Live.

At one time it was imagined that plants and trees lived on the soil itself, taking up minute particles of matter and digesting them, but we know now that their roots absorb nothing but the soil solution which to look at is clear water. How do the various metals and minerals get into this water? The answer is, by chemical action. There is no metal so hard, no mineral so tough that it cannot be reduced to a pulp by some acid or other chemical. When this happens the resulting compound is called a salt. Thus copperas, which is iron and sulphuric acid, is a salt of iron.

Common salt results from chlorine (another acid) acting on sodium, and is chemically speaking chloride of sodium. Sodium is a metal similar to lead, besides being the base of common salt; it also combines readily with carbonic acid, making carbonate of soda. It is soluble salts such as these that are found in the soil solution. Silica, which is flint, glass, quartz, etc., is one of the hardest things in nature, and yet is found in the soil in solution. Every one knows what water-glass is, the stuff they preserve eggs in. The name is looked upon as a joke, for how could glass be dissolved in water! Yet this seemingly impossible feat is quite easy. Silica itself is an acid and when reduced to a fine powder combines very readily with potash, making a soft jelly which dissolves in water, the proper name for it being silicate of potassa. Thus it will be recognized that with a soil full of various acids any metal or mineral combination is possible furnishing soluble salts for the soil solution.

Humus and all decaying matter before it has become humus, gives off to the soil carbonic acid, humic, ulmic, geic, crenic and apocrenic acids; sulphuric acid, chlorine (an acid) and phosphoric acid are also present in the soil.

Carbonic acid forms carbonates with iron, lime, magnesia, sodium, potash, etc.

When the family teakettle is boiled all the carbonic acid is driven off and the lime iron, etc., become hard again, settle to the bottom and form a crust. This is a fair sample of what the mineral matter in the soil solution looks like when the water has been driven off. There are other acids found in the soil besides the mineral and humus acids already referred to. The bottom lands in wet countries often develop a sourness which is the product of vegetable fermentation, and has nothing to do with the acids usually found in the compounds of the soil solution. This fermentation is caused by too much water and not enough air, and is overcome by liming, aeration by deep plowing, and alkaline fertilizers. The acid produced is much the same as that found in ensilage.

Mineral Matter in Soils.

The total amount of mineral matter found in the soil solution is very small, even in good soil not much over one-tenth of 1 per cent, or 1/1000 part of the solution, the rest being water. It would seem almost incredible that the minute amount of the different acids involved in such a small undertaking should, when diluted with water, be able to set up any chemical action whatever. This is explained by the fact that, however diluted any substance may be in water of any other medium, its original atoms always remain intact and these can combine with other atoms of minerals, etc., whenever they happen to make a contact, thus creating molecules of another compound. Measuring the amount of mineral matter in the soil solution requires careful work. If the solution is taken when the soil is full of water it is evident that it will be very weak; on the other hand, if the soil carries a small percentage of water the solution will naturally be rich. In order to judge of the soil from a table of tests it is necessary that the percentage of moisture in the soil at the time the sample was taken should also be given. There are several ways in which the weight of the mineral matter can be arrived at. The solution, of course, is heavier than distilled water and a comparison by weight will give the approximate amount of mineral in it. Another method is to boil the water off until nothing is left but the solid matter, which can then be weighed and compared with the weight of the water and a percentage arrived at.

It is found, of course, that a rich soil solution gives much better results in crop yield than a poor one, and less water is needed to supply the plant with the mineral salts needed for its growth.

Some years ago soil analysis was all the vogue. A man would sometimes buy a farm on the strength of what the laboratory men told him about his soil and the crops that would flourish there. There were many grievous disappointments and we pointed out at the time that it was not the soil that should be analyzed, but the soil solution; for, however rich the soil, it may yet yield a weak solution because the different chemical elements are unevenly balanced and its equilibrium may be upset by too much of one thing and not enough of another. The most active factors are the acids and alkalies, and if a soil is a little too acid or a little too alkaline, trouble is sure to result until this condition is corrected. It is also a well known fact that clay loams give a better analysis and last longer than sandy loams; but the latter nearly always give better yields at first and are preferred by the farmer. The trouble is, the mineral plant food in clay soils is usually plentiful, but is difficult to unlock owing to its poor physical condition and certain alkaline reactions which are not generally understood. In such cases as this an analysis of the soil solution will tell the farmer exactly what he has to expect, for the crop is made by the solution, not by the soil itself.

Questions About the War Finance Corp. Answered

BILLION-DOLLAR LOAN FUND EXPLAINED FOR PROSPECTIVE BORROWER.

D. W. THOMAS.

SO many questions are being asked by farmers concerning the War Finance Corporation that the Agricultural Bureau of the Denver Civic and Commercial Association has prepared an analysis of the War Finance Act in question and answer form. This analysis has the approval of the Agricultural Loan Agency of Colorado. Questions and answers of especial interest to prospective borrowers follow:

What is the U. S. War Finance Corporation?

The War Finance Corporation was created by Act of Congress for the purpose of providing the necessary finances for industries essential to the successful prosecution of the war.

What is the agricultural credits bill?

The Agricultural Credits bill was presented to and passed by the recent special session of Congress. It is an amendment to the Act creating the War Finance Corporation whereby the powers of the War Finance Corporation are extended to permit that agency to make financial relief available to producers of agricultural products, including livestock.

What are the objects of this bill?

The objects of the bill are to permit government funds to be advanced to financial institutions and through them to individual farmers and livestock men in order to relieve the present period of depression and enable the grower to market his produce in an orderly and profitable manner.

How does the War Finance Corporation operate in Colorado?

Its affairs are administered by a state committee appointed by the board of directors of the Corporation at Washington, consisting of Albert A. Reed, W. B. Morrison, Lon D. Sweet, all of Denver; G. F. Trotter of Pueblo, and D. T. Stone of Grand Junction. The Colorado committee maintains headquarters in the United States Bank Building, in Denver, in charge of C. Lee Wood, secretary. Its meetings are held to pass on applications for loans.

Is there any connection between the War Finance Corporation and the Federal bank?

None whatever; each operates under a different act and upon a different basis.

Are War Finance Corporation funds being utilized anywhere else in the country?

Yes, they are available to all states. They have been taken advantage of particularly in the cotton producing sections where they have been of inestimable aid in stabilizing the industry. Beneficial results are also being felt in the Middle West.

How can these funds benefit the producer of agricultural products?

By using them he can save himself from being forced by circumstances to put his immature livestock on the market; or his various farm produce on a glutted and falling market; he can rehabilitate himself and restock upon advantageous terms; or having passed through a period of depression he can establish himself more firmly and expand his operations.

An Emergency Measure.

Why does the government loan this money at this time?

Because economic conditions in the agricultural industries are bad and it is felt that it is the duty of the government to render aid where possible. Agriculture is the nation's fundamental industry and all other lines of business and industry can expect no relief until agriculture is again on a profitable basis.

How does the farmer or livestock man obtain loans or advances from the War Finance Corporation?

He can secure them through his bank or through an accredited livestock or agricultural loan company, or co-operative association of producers.

What procedure is necessary to obtain loans?

Take the matter up with your local bank, or with the Livestock Finance Corporation of Colorado (address given below), where the necessary forms can be properly filled out. These will then be submitted to the agency, heretofore described and sometimes called the "Regional Committee of Colorado," where they will be examined. This committee may, if deemed necessary, call for additional information. The committee will then refer the application together with its recommendations, to the War Finance Corporation at Washington. The applicant will be duly notified of the action taken by the War Finance Corporation. When the application is approved the applicant will receive the money through the Federal Reserve Branch Bank located at Denver. The Denver branch has been appointed custodian and fiscal agent for the Corporation and all collateral paper will be held in the Denver branch bank, where payment can be made at any time direct or through a correspondent bank.

Where can the necessary application forms be secured?

They may be obtained from the office of the Agricultural Loan Agency of the War Finance Corporation, 604 United States National Bank Building, Denver; from your nearest Federal Reserve Bank or Branch bank; from the Livestock Finance Corporation of Colorado, Exchange Building, Union Stockyards, Denver.

For what purposes can loans be obtained?

They can be obtained for agricultural purposes, including the breeding, raising, fattening, and marketing of livestock.

To whom may advances, or loans, be made?

The War Finance Corporation is authorized to make advances to any bank or banker, or trust company, which may have made advances for agricultural purposes; that is, for any purpose connected with the growing, harvesting, preparation for market, and marketing of agricultural products, or the breeding, raising, fattening and marketing of livestock; or which may have discounted or re-discounted agricultural paper.

Can the farmer or livestock man obtain loans direct from the War Finance Corporation?

No. It is impossible for the government to deal in this matter with millions of individuals; if such a course were pursued it would require years to put the money out.

Why cannot the individual borrower go direct to the War Finance Corporation?

As stated above, it is impossible for the government to properly function when dealing with individuals. It must deal with established institutions or reliable groups. The element of time is of the greatest importance in this matter and the present system is the speediest one that can be devised.

What security is required?

The War Finance Corporation will accept from the bank discounted or rediscounted notes, drafts, bills of exchange or other negotiable instruments, secured by a wide variety of collateral such as livestock, grain, implements, etc.

What is agricultural paper?

Agricultural paper consists of promissory notes, etc., based upon agricultural products.

Will loans be made upon discounted or rediscounted paper?

Yes.

Can the War Finance Corporation make advances on paper secured by mortgages, warehouse receipts, bills of lading, etc.?

Yes.

Can Purchase Livestock.

Can the farmer who has only resources of feed borrow money to buy stock to consume this feed?

Often he can. Much will depend upon the nature of his venture—all attending circumstances will be considered.

Can hogs be used as collateral?

Yes, in connection with other forms of security.

Will the War Finance Corporation rediscount commercial paper?

It will in exceptional cases.

Can loans be obtained to buy new stock, dairy cows for example?

Yes. Considering attending circumstances.

Will loans be made upon real estate?

Only in conjunction with other security as outlined above, for the purpose of properly margining the loan. Straight real estate loans cannot be made.

How much can be borrowed on cows, heifers, steers, colts, ewes, etc.?

That depends upon the age of the animal, ability of the applicant to properly and profitably manage the same, his previous experience, present indebtedness, etc.

Can a dairyman or stockman borrow

(Turn to Page 12.)

Why the U. S. Grain Growers, Inc., Will Succeed

PROGRESS OF WORLD'S LARGEST CO-OPERATIVE MARKETING CO.

R. F. LONG.

WORTH while opinions on farm matters must come from farm people. That is an axiom expressed by C. H. Gustafson, president of the U. S. Grain Growers, Inc., when he was asked recently why he was so sure that the new farmer-owned grain marketing company would succeed. After a lifetime on a farm with ample opportunity to hear innumerable opions expressed on farm matters by men who thought they knew, but did not, it is little wonder that this rugged farm leader, fresh from a 47-year residence on a farm, should have over-sensitive ears attuned to opinions and expressions of his neighbors who walk the furrows and harvest their crops.

Perhaps that is the explanation of the rapid rise of this Nebraska farmer, unknown outside the borders of his own state, or even his home county, until a few short years ago, and whose sound co-operative philosophy, ability to get profitable results, kindly manner and sincerity have placed him as the foremost national figure in the co-operative marketing movement in America today and whose name has become known to farmers in every English-speaking country in the world.

Mr. Gustafson prizes the endorsements of the U. S. Grain Growers that have been expressed by men of national prominence and influence. He referred with considerable satisfaction to the confidence which men like Senator Arthur Capper of Kansas, Governor S. R. McKelvie of Nebraska, Henry C. Wallace, Secretary of Agriculture, Herbert Hoover, Secretary of Commerce, United States Senator Peter Norbeck of South Dakota, Bernard M. Baruch of New York City, and others, have in the ultimate success of the U. S. Grain Growers, Inc.

It was plain, however, that Mr. Gustafson values their endorsements not as individuals, but as coming from men of good judgment who, like himself, have their ears tuned to the reactions and opinions of his neighbors in the corn rows and wheat fields of the grain producing states. It was those opinions as expressed by action taken by farmers in sections where organization work of the U. S. Grain Growers is in progress, that Mr. Gustafson stressed in reviewing the situation with the writer.

Thirty-five thousand grain growers, in round numbers, had been signed on the five-year contract, and 850 elevators and grain growers' associations had affiliated with the organization when the work was suspended for the holidays, representing approximately 90,000,000 bushels of grain. With the membership increasing at the rate of 7,000 per month for the past three months, directors and officers of the organization are justified in displaying enthusiasm as to the future.

Is Just Beginning.

This 35,000 members and 850 elevators and local associations is but a small beginning. Great sections of grain growing territory are still untouched. In Illinois, which is first in membership with about 10,000, the work thus far has been concentrated in ten counties. This plan of concentrating the membership drive in small areas and completing the work in each county before passing to another is being followed, insofar as possible, in all of the twelve states where the work is under way.

This overwhelming majority of Nebraska's 7,500 grower members are located in the southeast quarter of the state, while in Iowa, one of the last states to start their campaign, the drive for members is confined to a few counties in the north central section of the state. Memberships in Oklahoma have thus far only been solicited in two tiers of counties in the western part of the state, while Missouri's campaign is confined to a group of six counties along the Missouri river and two counties on the eastern border of the state. With the membership at present concentrated in these small areas, it can readily be seen how the figures will mount as new territory is opened up to organization. Further, it affords a conclusive answer to the opposition's criticism that the membership will be so sparse in communities as to make shipments impractical.

Kendall County, Illinois, was the first county in the United States in which the work of organization has been completed. Of the 1,200 farmers in the section who produce a marketable surplus of grain, exactly 892 became members of the farmer-owned company. This represents 85 per cent of all grain grown in the county.

Organization leaders in DeKalb County, Illinois, report that 778 growers are under contract and estimate that 300 more contracts could be secured. According to the report, the county judge, leading banker and largest land owners in the county have joined the Grain Growers' roll.

Opposition Doesn't Discourage.

The literature of the Grain Dealers' National association is apparently having no effect on the grain growers' campaign; for instance, one of their posters admonishes the farmer to "Ask Your Lawyer or Banker" before signing any contract. The manager of Tilney Farms in Minnesota, which comprises twelve tracts of land aggregating 5,200 acres, when approached by a solicitor of the farmers' grain marketing company, submitted the contract to the attorney for the Farms for examination and it was immediately negotiated after a careful scrutiny. A number of other lawyers have signified their approval of the contract by signing up the grain on farms owned by them, among them T. D. Stack of Walhalla, N. D., and J. E. Sundberg of Kittson County, Minnesota. A. R. Voss, owner of the twenty-nine Voss Farms at St. James, Minn., the largest contract to be signed with the Grain Growers, went over the contract in detail with his attorney before signing.

Bankers, generally, have signified their friendliness toward the farmers' association. Hundreds have written to ask how they might assist in informing the farmers in their community. Many who own farms have joined. C. H. Wallace, president of the First National Bank of Homer, Ill., signed contracts covering his six farms representing several thousand acres of land, among them a 510-acre grain farm in Marshall County, Minnesota. Daniel V. Stephens, banker, former congressman and extensive land owner at Fremont, Neb., placed his name on the dotted line when the drive was extended to that section. Speaking before the annual convention of the Nebraska Farmers' Grain Dealers' Association a few days later, he declared that "The U. S. Grain Growers is the greatest step ever taken by the farmers of this country."

An Illinois banker who came out unreservedly for the Grain Growers is U. G. Fowler, of the Fowler State Bank, Rantoul, Ill. When he signed four growers' contracts covering his 1,463 acres of land in Champaign and Vermilion counties, he said to the Illinois farmer who took his membership: "I don't care who you tell that I am a member of the U. S. Grain Growers. I am for this thing. If it hurts my business in this or any other community, I will gladly let my little business go rather than not support a thing that I believe to be right. The time was never more ripe than right now, for farmers to stick and go through with this organization."

Leaders Are Joining.

Farm leaders who have signified their approval by taking out memberships in the farmers' company, are: J. R. Howard, president of the American Farm Bureau Federation; J. W. Coverdale, secretary of the American Farm Bureau Federation; State Senators Lantz and Dunlap of Illinois; E. R. Danielson, secretary of the Nebraska State Board of Agriculture; J. S. Canaday, president of the Nebraska Farmers' Grain Dealers' Association, and other men of prominence. United States Senator Peter Norbeck of South Dakota, in a letter to the Chicago office, states: "The fact that I myself will sign a contract at the first opportunity is evidence of my belief in the plan."

Nebraska and Iowa elevators are displaying especial interest and showing a desire to affiliate as early as possible. Elevator contracts from these two states have been received at the general office at the rate of four a day for several weeks. One elevator board in Wyoming, where organization work has not yet started, wrote to the Nebraska office and insisted that an organizer be sent to sign them up at once. Rather than wait for local meetings at each shipping point, the elevator boards in Iowa are driving many miles to hold joint meetings. In one instance, A. L. Middleton, director for Iowa, explained the plan to thirteen elevator boards assembled in a meeting at Algona. Every farmers' elevator in Plymouth County, Iowa, had requested Mr. Middleton to come before he was able to get to the county. All records made in other states were broken when seventy farmers' elevators in Iowa affiliated with the Grain Growers during the first four weeks of the Iowa drive for members.

A particularly good example of interest on the part of Iowa farmers is the case of George Brewster of Sheldon, Iowa, who wrote in to say that he had received the "Sign Here" booklet of the opposition. He stated that the farmers of his community who had received copies were up in arms and had called a meeting to discuss it. "I am a very busy farmer, but I am not too busy to help out when I am needed. Send me full information and I will call meetings of farmers in this and adjoining counties to tell them what the U. S. Grain Growers really is," is the way Mr. Brewster expressed himself.

In Nebraska, 205 elevators, all but five of them a co-operative institution, have linked up with the national farmers' agency. The strongest farmers' elevators in the state are among this number, including the Minden elevator of which J. S. Canaday, president of the Nebraska Farmers' Grain Dealers' Association, is president; the Dalton elevator, which has a capacity of 36,000 bushels, and at different times has handled more grain than any elevator in Nebraska for a twelve-month period, and the Meads elevator, the modern concrete, electrically operated farmers' house in the home community of President C. H. Gustafson, who helped to organize the company.

Colorado Has 900 Members.

Due to the large acreages farmed in Colorado, which is comparatively new farming country, the 900 memberships signed in that state cover 150,000 acres of land and represent 1½ million bushels of grain. As an instance of the interest that is being manifested by Colorado farmers, every grower of grain in the vicinity of the shipping station at Deertrail has enrolled with the co-operative company. When the grain growers' solicitor arrived at Deertrail he was met by a number of the prominent farmers in that section, who discussed with him plans for a thorough canvass. It was estimated that there were seventy farmers in the territory who were eligible for membership, but upon completion of the canvass the records showed that 127 farms had been signed, leaving according to the leaders who were co-operating with the solicitor, only two farmers in the community whose names were not on contracts. These two farmers later signified their willingness to come into the organization.

On November 19, Deertrail farmers and business men held a barbecue to celebrate the first 100 per cent community membership in the U. S. Grain Growers, Inc.

The widespread interest that has been developed among farm organizations is revealed by the active support that is being given the grain marketing program by farmers' organizations. In addition to the endorsements by resolution of the American Farm Bureau Federation and the Farmers' National Grain Dealers' Association, the grain growers' program has the active support of at least twenty-five state farmers' organizations.

In Oklahoma, the farmers' company has the unstinted support of the Oklahoma Farmers' Union and the state association of farmers' elevators. In Colorado, the farmers' elevator association, the State Grange, the farm bureau and the Farmers' Union are assisting in organization work. In Kansas, the state farm bureau is actively supporting the work of the Grain Growers, while the members of the Grange and Equity Union have shown a friendly attitude toward the movement.

Missouri's director in the national co-operative organization is also president of the Missouri Farmers' Grain Dealers' Association. Three organizations in Nebraska, the Farmers' Union, Farmers' Grain Dealers' Association, and the Farm Bureau are giving their united effort to furthering the movement.

Opposition on the part of the Grain Dealers' National Association had seemingly died down following their national convention on October 3, 4 and 5, when R. I. Mansfield, chairman of their special executive committee, told the membership that the Grain Growers were not functioning. The latest development brought to light, however, is an appeal sent out by B. E. Clement, president of the grain dealers' association, to members and non-members alike, requesting $10 contributions and stating that "this work must be continued with vigor and persistence if our industry is to survive."

"The type of opposition offered by the radical element in the grain exchanges and of the Grain Dealers' National Association has only stimulated the interest of farmers because it was the final recommendation that the U. S. Grain Growers and farmers wanted," Mr. Gustafson says. "Their frantic concern over our development and the measures which they chose to retard our progress only served to discredit themselves. Had they wished to discredit the U. S. Grain Growers or its officers they would have had to profess friendliness toward our program."

Farmers' Dollar Cheapest in 30 Years.

Measured in terms of purchasing power, the farmers' dollar in 1920 was worth 89 cents, in May, 1921, it was worth 77 cents. During the past twelve months it has been worth less than any preceding twelve months in thirty years. While measured by the standard of purchasing power of the products by the absolute prices of farm products as compared with the prices of other commodities, the test of quantity output or the test of income and rewards for capital invested and labor employed, agriculture in 1920 and in 1921 was relatively worse off than other industries. Mr. Reynolds, our Washington representative, discusses this and other important topics in his Washington letter in this issue. Among other subjects handled are:

Would saddle an extra tax on the farmer.
Committee drafting new tariff bill.
Public work during periods of depression.
Problems before good roads congress.
To provide help for dry-land farmers.
LaFollette charges not substantiated.

In speaking of Senator LaFollette's charges against representatives of farmer organizations, Mr. Reynolds says: "The charges are misleading, unjust and not substantiated by the facts." It will pay you to keep in touch with what is happening in the halls of Congress. Mr. Reynolds' letter appears on page 9 of this issue, "From the Nation's Capital."

Idaho Makes Good Showing.

The University of Idaho made its initial entry at the International Livestock Exposition at Chicago November 26-December 3, when it showed Idaho Sensation, a purebred Hereford senior calf that stood second in a class of twenty-nine. It is claimed that this was the largest and best class of Hereford calves ever shown at Chicago. The calf that stood first in this class was made reserve grand champion steer of the show. Idaho Sensation was the grand champion fat steer over all breeds at all the northwest shows this fall. This calf was bred by Herbert Chandler, Baker, Ore. He was fitted and exhibited by the University of Idaho.

The University of Idaho showed a yearling Southdown wether of its own breeding and fitting at the International at Chicago that stood third in a strong class of twenty-seven. This yearling Southdown wether, like Idaho Sensation, was the grand champion fat wether over all breeds at all the northwest shows this fall.

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American Seed Company Box 701, Lancaster, Pa.

Work of Breeders' Association

CO-OPERATION IN BUILDING UP HERDS.

B. W. FAIRBANKS.

THE work of a county livestock breeders' association includes many and important lines of activities. The accomplishment of this work is possible only by the united efforts of every member. United effort always brings results, while divided effort yields nothing. It was not until the armies of the allied forces united themselves under the leadership of Marshal Foch, that victory was made possible. Organization has the tendency of directing the attention of all the members upon one program, and if it contains feasible projects they in time will be accomplished. If a county livestock breeders' association sets out to make the livestock of its county second to none in the state, it can be accomplished if all of the members combine their efforts in that direction. One breeder may have such an ambition for his county, but he alone can never make his ambition a reality.

In our counties, we have some excellent herds and flocks, but we must face the truth and admit that we have too many herds and flocks which show careless methods of breeding, and haphazard care and management. This condition can be corrected by organized effort. This is the work of a county livestock breeders' association, and it can be accomplished by the adoption and the carrying out of a program which includes the following projects:

(a) Education, (b) Protection, (c) Buying, (d) Selling, (e) Advertising, (f) Disease Eradication.

Education.

No matter how long a man may be a breeder of livestock or a student of the industry, he never knows all that there is to be known. To succeed in any line of business, a man must always "keep his eyes open and his ears to the ground," looking and listening for new ideas and more information applicable to his particular kind of work. The other fellow may have an idea which he has learned by experience which may be just the thing needed to assist another in a present difficulty. A livestock breeder occasionally may profit from the advice of the brightest and keenest associates engaged in the same line of breeding. It has been my observation that they are always ready to aid and assist.

We live too close together these days to try to isolate ourselves and be "self-sufficient unto ourselves." We seek independence, but in the last analysis we are all dependent upon others. The nations of the world have tried the isolation theory and they have failed. The present-day breeder does not isolate himself upon his home ranch, but he keeps himself in close touch with the outside world, so that he will not miss his opportunity to secure better animals or miss an idea which would assist him in producing better stuff. He may be in danger of missing a suggestion which will help him in caring for or feeding his stock in a more efficient and economic manner. Buyers do not seek but they are sought, and the breeder who has isolated himself and who is not known will never sell his surplus stock at a profitable price. People do not pay $106,000 for a bull, as did the Carnation Farms, to an unknown breeder. Orion Cherry King, Jr., was sold for $16,000 because his breeder had extended his world of interest beyond the boundaries of his Ohio farm.

A county livestock breeders' association gives every breeder in the county an opportunity to keep himself informed upon up-to-date methods of reaching success. It is then the duty of such an organization to make the members' opportunity good. Through the meetings of the association, helpful suggestions may be obtained by a discussion of a common problem. Plans may be formulated which, when carried out, would be for the benefit of all. There are many successful breeders of livestock in the state of Colorado who would be willing and glad to come and address a county livestock breeders' association. Their message would be inspirational and full of helpful information. The experiences of one are always helpful to another.

Protection.

"In union there is strength" is an axiom. A recent newspaper item gave the information that the farmer receives only 37 cents of the dollar paid by the consumer for farm products. Some of our leading authorities have estimated that as an average the farmer receives 50 per cent. Agriculture is the only large occupation of man which is left largely to the mercies of supply and demand. The farmer buys his supplies and sells his products upon a market controlled by the most powerful organizations that exist.

The protective program of any one county livestock breeders' association would depend upon local conditions. To illustrate what can be done, the work of some cornbelt organizations may be cited. Their protective program consists in collecting information and statistics relative to some given problem, and then using these in a powerful way in formulating and passing necessary laws in their state assembly.

Buying.

Just how far co-operative buying may be carried out is a problem, and its solution will come only through the experiences of county livestock breeders' associations and other organized groups. It is possible for the breeders of livestock to co-operate in the buying and using of herd sires. At the present time there are some organizations upon the Western Slope which are contemplating the purchase and use of dairy bulls in this manner. Associations have bought animals by the carload and brought them into their community at a great saving of money and effort. When this is done, great care must be taken to get animals with a clean bill of health. There is no question but what a great deal of disease has been brought into the state through such importations.

If an organization succeeds in getting high quality stock and stuff of good type into their community, it should not be often necessary for a breeder to go elsewhere to purchase animals. It certainly would be a saving of traveling expense, freight rates, and time, to purchase new stock close to home. It would keep the money in the community, and it would be a much safer procedure, as a breeder would have more of an opportunity of knowing what he was getting and with whom he was dealing.

A livestock breeders' association can aid materially its members in buying stock, by being in a position to keep them posted so that they may buy more judiciously and with less risk of deception.

Selling.

A work of a county livestock breeders' association and one which has proved to be a success is the selling of surplus stock. Many organizations have built sale pavilions and it is their practice to hold sales a certain number of times during the year. The success of such work is far greater than one would suspect. To illustrate the extent of such sales, the writer counted in a recent copy of Hoard's Dairyman, twenty-six sale announcements, which were sales held under the names of organizations of livestock breeders. It is to be remembered that this is only one issue of one paper, and deals with only one class of livestock, namely dairy cattle. Well organized associations are more apt to gain recognition and attract buyers than individual breeders. Certainly their work is done more effectively and at a smaller cost than when done by an individual breeder, for the expense is prorated among those consigning.

The work of selling by an organization is not confined entirely to the sale ring. Many organizations carry advertisements in the leading papers of the country, the expense being met by the association. Sale lists are published to aid the secretary in answering inquiries. These lists contain the names of the members with livestock for sale, and their individual offerings are given. An attractive bulletin of information may be published, which would make an ideal advertising feature. A breeders' directory is gotten out by some associations for the guidance of those interested.

Advertising.

I have mentioned advertising under the discussion of selling, but to show its possibilities and to emphasize its importance, I would like to set it off alone. By well placed advertising, a community can bring itself into prominence if they have the quality and type in their animals to back up their advertising. The egg from the Petluma district of California, the apple from Hood River, Ore., the Jersey cow from the Island of Jersey, should remind us of what advertising and a good product can do to bring a small community to the front. The small town of Lake

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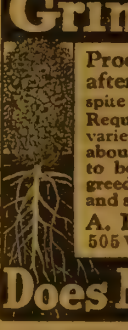

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You get this one-man outfit direct from factory at lowest factory price. Also special sale prices on 4 H-P Log Saws. 30 Days' Trial—10 Year Guarantee. Cash or Easy Terms. Send your name and address on a post card before sale closes. WRITE NOW.
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YOU SAVE FROM $7 TO $15 ON EVERY SADDLE AND HARNESS
Direct from our workshop. Send for our free catalog.
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Singers, Whites, New Homes and others. $15 to $40. Write for FREE Illustrated CATALOG. We pay the freight.
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Mills, Wis., is another illustration of what can be done by combined effort in organization advertising. The breeders of this section have caused Lake Mills to be known the world over as a breeding center for good Holstein cattle. This fall they held their twenty-fourth semi-annual consignment sale. They have attracted buyers from all over the world.

Disease Eradication.

One of the great scourges of the live-stock industry is tuberculosis. This disease has decimated our herds and each year it exacts prodigious tolls. It can be controlled only by organized effort. A competent veterinarian might be employed to test the herds, and supervise the cleaning of those places which have been found to be infected. After the test has been completed, then the rule should be made that no more animals will be brought in without a clean bill of health. Prevention of disease is more important than cure. Through the educational program of county livestock breeders' associations, members may learn how to manage their stock so that it will not be predisposed to disease, how to properly ventilate their barns, how to feed for health, and how to obtain and maintain sanitary conditions. You cannot make a man be clean but you may educate him so he will want to be clean. Dr. Glover says "You cannot legislate a dirty man into cleanliness any more than you can legislate a sinner into Godliness."

Farm Bureau Resolutions.

The Colorado State Farm Bureau voiced the sentiment of its membership on a number of important rural problems at the recent annual meeting, held at Fort Collins. Some of the resolutions were reviewed in the issue of January 1. Following is a summary of the other resolutions, showing how the Farm Bureau stands on state and national measures and issues:

Demanding strictest economy in expenditure of the five million-dollar bond issue voted for public roads by the people of the state, and objecting to payment of wages in road work out of all proportion to the service rendered, stating that pay on highway work directly affects wages at which farm labor can be secured.

Urging the president of the Farm Bureau to appoint a committee of three to take up the matter of valuation with the state tax commission for the purpose of asking a reduction on valuation of agricultural lands.

Urging the adoption of a budget system by our state government, so that the cost and usefulness of various state bureaus and commissions may be investigated.

Recommending the mining of coal on state-owned lands by the state for its own use.

Urging much greater freight rate reductions than have so far been granted, asking repeal of the guaranty clause in the Cummins-Esch law and urging further general freight rate reductions on the basis of service rendered.

Endorsing the action of our government in taking the lead for disarmament, urging the limitation of armament as applied to military as well as naval operations, and assuring the hearty support of Colorado farmers to this great movement for the peace of the world.

Protesting against the proposed removal of the Forest Service from the U. S. Department of Agriculture to the Department of the Interior, for the reason that forest problems are necessarily agricultural, and pointing out the difference between the administration of the forests when they were under the Interior Department (1891 to 1905) and the present efficient administration under the Department of Agriculture.

State Lands for Soldiers.

Answer to C. C., Prowers County, Colo.

If an ex-service man is a successful bidder on a tract of state land he may take advantage of a provision by which payment for the land is deferred twenty years and the beginning of interest payments may be deferred three years. The law reads as follows:

Sec. 6. Payment for said lands shall in all cases be made as provided for by law; Provided, that if the person upon whose application said lands are offered for sale be the successful bidder, then and not otherwise, the following terms for payment shall apply: The sum bid, or any part thereof, shall not be due until twenty years from the date of said sale, when it shall be paid in full; all or any portion of the sum bid may be payable at any semi-annual period; all sums bid shall bear interest at 6 per cent per annum until paid; said interest shall be due and payable annually; payment of the first three payments of said interest shall be deferrable at the option of such purchasing applicant, until the end of the third year; the State Board of Land Commissioners shall have the power, but shall be under no obligation, to grant other extensions of time for the payment of interest, and all such overdue interest shall draw interest at 6 per cent until paid. The expenses of such sale shall in all cases be paid by the applicant.

Sec. 7. Until patent for said land shall have issued, the certificate of purchase issued at such sale and the interest acquired by any person whomsoever purchasing such lands thereunder, shall not be subject to transfer or alienation, lien or mortgage, voluntary or involuntary, but the interest acquired thereunder shall descend to the heirs of the purchasers, as in other cases. After patent has issued the ownership and power of disposition of said lands shall be absolute; but no patent shall issue prior to five years after the date of such sale, nor until said land is fully paid for.

Land Bank Loans for Elephant Butte Farmers.

Federal farm loans are soon to become available to farmers on the Elephant Butte Irrigation project in New Mexico. The decision to make loans comes after a lengthy fight made by the land owners with the backing of the Dona Ana County Farm Bureau. The loans will be on a 33-year basis under the usual terms of the Federal Land Bank at the rate of 6 per cent for interest and 1 per cent per year toward principal. That means, on a $1,000 loan, a farmer pays $35 twice a year and at the end of the 33-year period the mortgage is wiped out.

It was agreed by the land bank that 50 per cent would be the basis of valuation. The current selling price of the land, its productive value and earning power are to be taken into consideration in making loans. H. H. Brooks of Las Cruces, president of the Elephant Butte Irrigation district, stated that this action on the part of the Federal Farm Loan board redeems a promise made to the farmers more than four years ago, during the formation of the irrigation district, when they were given to understand that federal loans would be available. Difficulties arose on account of the legal status of the lands in the district, but these have all been ironed out.

Breeds of Beef Cattle.

No person can give a satisfactory answer to the question "What is the best breed of beef cattle?" for experience has shown that no one breed is superior to the others in the production of desirable beef. But in order to answer various questions concerning the different breeds, E. W. Sheets of the United States Department of Agriculture has prepared Farmers' Bulletin 612, "Breeds of Beef Cattle," which gives the characteristics of the beef and dual-purpose breeds raised in the United States, and a brief history of their development in this country.

The breeds included are the Shorthorn, Polled Shorthorn, Milking Shorthorn, Hereford, Polled Hereford, Aberdeen Angus, Galloway, Red Polled, Devon, and Brahman or Zebu. The Brahman is a breed native to India. In its native country it is used extensively for milk production, but in Texas and Florida, where it is bred to a limited extent, it is used almost entirely for beef.

In addition to the discussions of the different breeds there is also a comparative standard of excellence for the beef breeds which make it possible for the beginner to compare them closely point by point. This method of comparing breeds has not been used before in department publications. The introduction contains a brief resume of the work of developing the beef type of cattle. A copy of the bulletin may be obtained free by addressing the Department of Agriculture, Washington, D. C.

Lease Goes With the Land.

If A leases his land to B for ten years and B does not live up to the lease, can A order him to move, and if so, can he make him vacate on ten or thirty days' notice, or can B hold it till the first day of March when the first year is up? If B has a straw pile will he be allowed to move it, or does it remain on the place as manure? If A sells his place, will that break a lease, or can B hold the place where it isn't spoken of in the lease?—Old Subscriber, Colorado.

Notice of forfeiture may be given and then suit to regain the possession of the property may be brought. The straw may be moved. The lease goes with the land and is good until it expires, unless forfeited.—Hamlet J. Barry, 726 Equitable Bldg., Denver.

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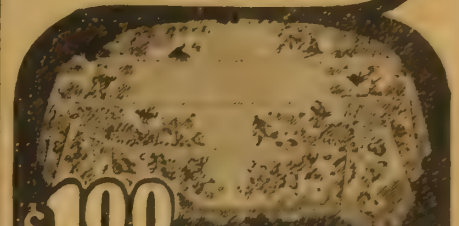
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Washington the World Capital.

The new year of 1922 enters with Washington the acknowledged world capital. The eyes of the nations are centered upon her. The American government is not only the world capital and political stabilizer, but the Santa Claus to all nations.

Never in the history of our country have there been such big broad problems under consideration by the government, problems that in their solution will have a far-reaching effect on the farming and livestock industry of the country.

I believe that every progressive reader of Western Farm Life is keenly interested in watching the solving of these important problems of Congress and the administration. I believe that you readers of Western Farm Life will appreciate receiving in each issue an unbiased nonpartisan and reliable report of just what is transpiring in the halls of Congress and at our national capital.

I have made arrangements in connection with several of the leading farm journals of the country whereby Western Farm Life will be represented in Washington by Mr. E. E. Reynolds, and will receive from him facts as to just what is being done and what efforts are being made to relieve the distressing situation that is today confronting American agriculture.

We are starting this splendid service in this issue. It appears on the opposite page under the caption "From the Nation's Capital." Read it. Mr. Reynolds is painstaking in ferreting out congressional facts. He puts his findings on paper clearly, strongly, briefly and entertainingly. You will enjoy and profit by reading his Washington letters. Let me urge you to read his letter in this issue. You will then look forward to his future letters with interest.

W. S. EDMISTON,
Publisher.

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Governor McKelvie's Message.

Governor McKelvie of Nebraska brought a real message to Colorado when he addressed the meeting of the Denver Civic and Commercial Association January 6. He came at the request of the Agricultural Bureau and the National Western Stock Show Association, to start the fireworks for the big show which is now in progress. Assembled at luncheon were representatives of the livestock industry and the business men of Denver, to hear the farmer-governor of Nebraska talk on his own subject—agriculture.

It was no ordinary address, but a rousing, convincing and vigorous presentation of facts as they exist. Agriculture, he declared has taken its medicine in the readjustment and is now on the up-grade. Business has not finished liquidation. He admonished business to face the music just as the farmer has done, because each and every class is bound, in the end, to take its share of losses. He had a good word to say for the co-operative movements that are doing their share to improve marketing conditions for the farmer, emphasizing the fact that their success depends upon the wisdom and justice with which these movements are handled.

Those who heard the address could not but feel that Governor McKelvie's interest in agriculture is a heart interest, born of a lifetime of contact and an insight into agriculture's problems such as comes only to those who are actually in the game.

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The Arapahoe Compromise.

To the Prairie Dogs of Arapahoe County: Notice—You are hereby notified that, in accordance with the terms of a compromise agreed to between the county commissioners and a delegation of taxpayers, all prairie dogs now sojourning within the confines of said county are to be exterminated forthwith and each and every prairie dog refusing to succumb to poison bait within the next ninety days remains alive at his or her own peril.

Something like that might be posted up in every prairie dog town in Arapahoe county, for the county agent is on the trail of the little "varmints," as a result of an official compromise by which the commissioners agreed to continue county agent work after the same had been dropped for reasons of economy. The commissioners were between two fires. On the one hand was the kicking taxpayer who insisted on economy; on the other the progressive farmer who believes that this is the poorest time of all to let up on methods of improving agriculture. Hence this unusual action, the object of which is to show the kicking taxpayer that a county agent may accomplish tangible things such as pest eradication as well as the somewhat intangible things often included in a list of accomplishments, such as increased returns from new varieties of grains, or from the application of better methods of farming, or the introduction of better livestock. A pile of dead prairie dogs is evidence of hard labor which a hard-headed taxpayer, even if he lives in town and cares nothing for the farmer's prosperity, must accept.

The commissioners should be given credit for diplomacy in this matter. They saw the humor of it, for in their official statement they say: "If Mr. Tedmon (the county agent) is to be the Pied Piper of Hamelin we must all work with him." And then they go on to urge the farmers to watch the county papers for news of the prairie dog campaign "and mark on your calendar the days of the slaughter."

All of this looks good for county agent work; it will help the farmers; it will appease the grumbling taxpayer, but it's rough on the prairie dogs.

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The Outlook for 1922.

When asked for a statement on the prospects of the farmer in 1922, Secretary of Agriculture Wallace said that no man whose opinion is worth considering would care to make any hard and fast prophecies. He added, however, that there are signs which indicate that the coming year should be a better one for the farmer and for those who deal with him than was 1921. Among these hopeful signs he mentioned the following:

Credit conditions are better both through regular channels and through the special agencies created to meet the farmer's needs. Interest rates also are softening.

Reductions already made in freight rates on farm products lighten by that much the transportation burden which the farmer has been carrying.

Cost of producing farm crops will be lower relatively in 1922 than in 1921.

Very likely there will be a reduction in the acreage of some of the grains of which we now have such a large surplus, and this should tend toward better prices.

The paralyzing effect of the sudden drop in prices is wearing off, and farmers are entering the new year more hopefully, believing that the worst is over.

Congress has indicated a willingness to enact such legislation as promises to be helpful.

Farmers are coming to see more clearly that the task of putting farming on a sound business basis is really up to them and that through organization they can reduce marketing costs. In this they will have increasing help from the Department of Agriculture and the various state agricultural colleges which now see better than before that they must give the farmer the same sort of help in the marketing of his crops that they have been giving him in the production.

In the industrial and financial centers there is coming to be a better understanding of the important part the farmer plays in our general economic scheme, and consequently a decidedly more intelligent and sympathetic attitude toward him and his problems.

With prices of farm products falling and the future very uncertain, even those farmers who had money laid by—and there are a large number of such—have been restricting their buying to what they had to have. Now with the growing belief that prices have hit bottom, buying will be resumed and should increase in volume, and manufacturers and retailers who make or sell things that farmers need or want should have better business this year.

Everything considered, therefore, we are entering the new year in a spirit of hopefulness and good cheer. The Secretary said, in conclusion, that he saw nothing which indicates boom times for the farmer in the near future, but there does seem to be promise of better times both for the farmer and for those whose business is largely dependent upon him.

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That Free Seed Graft.

Will Congress listen to public opinion this time and finally cut out the free seed graft, or are we to witness a repetition of the previous session's experience when the House re-inserted the appropriation after the Senate had eliminated it? Let us hope that history will not repeat itself. The Senate has again eliminated the item from the appropriation measure, but at the time this is being written efforts are being made to persuade the House to restore the item and thus once more waste nearly a half million of the taxpayers' money on political by-play that has become a scandal in our legislative history.

The direct appropriation for free seed distribution amounts to $235,000, but it takes just about again as much to mail the packages, consequently the estimate of half a million dollars is not far wrong. Throwing away money in these times of stress is criminal. And to do it in the shape of petty graft is idiotic. No sensible voter allows a package of free seeds to influence his ballot on congressman or senator, yet that and nothing else was the inspiration of the plan when it was originated many years ago.

It has been charged that certain eastern seed houses have been in the habit of disposing of their second rate and left-over seeds to the government annually for this free distribution, and that the lobby for those directly interested in the sale of seeds is responsible for keeping the practice alive year after year. That story sounds likely because the average congressman is intelligent enough to know that he cannot win votes by giving away seeds. There must be some influence other than peanut politics behind the scheme, else it could not have survived in the face of public disapproval so long.

The farmers are well represented at Washington now and if the free seed item slips through once more we will find out the real reason from the American Farm Bureau Federation's legislative committee.

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Indications of Water.

What are generally the indications of shallow water where a person is prospecting for a well?—R. H. B., Montezuma County, Colo.

There is no sure way of telling whether shallow water exists, but sometimes the surface vegetation is an indication. However, rabbit brush, and scrub oak are not indications of the nearness of water. These shrubs are found on slopes and hillsides where it might be two or three hundred feet to water. In the mountain districts aspens are usually considered a good sign that water may be found at no great depth. However, they are not certain indicators because the growth might be due to contour of the land, being found in spots where the snows lay unusually long in the spring.

News of the Farm Bureaus

Saguache County Elects—The fifth annual county Farm Bureau meeting of Saguache County, Colo., proved to be the best held since its organization. President N. E. Morgan in his address on the value of Farm Bureau work, estimated that in the five years of its existence it had benefited the county over $150,000. This benefit, he stated came to both members and non-members. He said it would not be short of a calamity to get along without the aid of the Farm Bureau and the county agent. The Saguache Farm Bureau had a $10 membership fee last year, but decided to reduce this to $5 so as to conform to the general fee in Colorado. Officers were elected as follows: President, N. E. Morgan, Hooper; vice president, H. B. Means, Saguache; secretary, G. V. Rudd, Hooper; treasurer, C. E. Wilson, Villa Grove; dairy improvement, H. Talbot, Saguache; livestock improvement, E. E. Wilson, Alder; crop improvement, I. F. Rockey, Russell Springs; farm accounting, C. E. Gibson, Gibson; Marketing, O. F. Diller, Center; county fair, H. B. Means; Saguache.

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Growers Ask 33 Per Cent Wool Tax.—The wool manufacturers were before the Senate Finance Committee in Washington recently urging speedy enactment of a permanent tariff. The wool growers presented their case before the same committee on the 1st of November, when representatives of fifteen wool growing states were present. The growers met in the Washington office of the American Farm Bureau Federation previous to the hearings, for the purpose of unifying their efforts in securing a 33 per cent clean pound duty in the permanent tariff. All the growers agreed that this was a fair duty. Because of the importations of foreign wools by the hundreds of millions of pounds, the domestic wool growing industry is rapidly decreasing. Our wool production has fallen off at the rate of 1,200,000 pounds annually for the last ten years. According to C. J. Fawcett, director of wool marketing for the American Farm Bureau Federation, who attended the Washington hearings, it is not only to the interest of the wool grower, but to the interest of the consuming public that the sheep and wool industry of the United States be provided with sufficient protection to justify its maintenance and development. At the present market price, there is only about $2 worth of grease wool in a choice worsted suit of clothes, if the garment is made of all virgin wool. However, in many cases a high percentage of shoddy is used, which of course greatly reduces the value of virgin wool required. If the tariff sought by the wool growers were applied to the full extent, it would mean considerably less than $1 on a suit of clothes.

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Lowden Joins Cotton Co-Op.—Ex-Governor Frank O. Lowden of Illinois has signed a contract to market all the cotton grown on the 32,000 acres which he owns in Arkansas through the Arkansas Farm Bureau Cotton Growers' Co-Operative Association. Mr. Lowden also instructed his plantation manager, J. A. Goodwin, to join the Arkansas Farm Bureau Federation. In signing the contract, Mr. Lowden said: "It is the only salvation for the producer. Every other line of industry has its organization and the farmer cannot hope to succeed without an organization. As conditions now are, the farmer has absolutely no voice in deciding what price he shall receive for his product. There can be no revival in business generally until the farmers of this country receive prices more in line with what they have to pay. The basis is all wrong and until the business interests recognize the fact and do something to bring about a change there can be no real prosperity in this country. The farmers of the south are fast realizing that only through co-operative marketing of their cotton will the time come when the agricultural interests of the south are no longer at the mercy of the business world. A wonderful start has been made."

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For a National Seed Law.—The National Canners' Association and a number of farm organizations, including the American Farm Bureau Federation, have been discussing the need for legislation providing for the Federal registration of stock seeds. The object is to improve the quality of seed available and to insure the purchaser against fraudulent or irresponsible sales of seed. The legislative committee of the American Farm Bureau Federation endorsed "the principle of certification and registration of agricultural seed and the establishment of standards for imported seeds."

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Transportation Policy.—The Farm Bureau's Transportation policy—immediate reduction in freight rates, with subsequent reductions as rapidly as savings can be effected in operating costs—continues to bring relief to the shipper. On December 16 the Interstate Commerce Commission refused to re-open the western grain case, as the carriers had petitioned it to do. This means that the reductions in the rates on grain, grain products and hay in the western territory, as announced on October 20, are now in effect. This case was brought before the Interstate Commerce Commission as a result of the petition filed by the Kansas Railroad Commission and was actively supported by the other states and the American Farm Bureau Federation. The Farm Bureau presented the bulk of the economic testimony and participated in the oral argument. As a result of this hearing the commission in its decision indicated that the railroads should remove one-half of the advance ordered last year on wheat, and that the new rates on coarse grain should be 10 per cent less than the new rates on wheat. In other words, rates on wheat should be about 17 per cent and on corn about 6 per cent, instead of 35 per cent higher, than they were August 25, 1920. The commission indicated that these rates should go into effect on

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From the Nation's Capital

CERTAIN INTERESTS ARE MAKING AN EFFORT TO FOIST EXTRA SALES TAX ON THE FARMER.

E. E. REYNOLDS

CONGRESS entered the new year with a long session in prospect, lasting, it is predicted, far into the summer. A vigorous effort is being made by certain interests to ride a general sales tax proposition through Congress on the back of a soldiers' bonus bill. The Mott bill now in committee provides for adjusted compensation for ex-service men to be raised by means of a general sales tax. It proposes five options for ex-service men, as follows: Adjusted service pay, insurance, vocational training, farms or homes, or land settlement aid.

Members of Congress who recently visited Canada to study the Canadian sales tax of 3 per cent levied on manufactures, say that the manufacturers, bankers and dealers, are satisfied with this tax, but that in every instance the tax is put over onto the consumer. The farmers as consumers pay the tax on what they buy, but not on their sales. In the United States the purchasing ratio of the farmers is estimated at 40 per cent of that of the entire nation. This means that under the sales tax proposition the farming people who make up less than 30 per cent of the population and whose ratio of net profits is much smaller, would be compelled to pay 40 per cent of the taxes for the support of the government, making the sales tax proposition a live issue with farmers. The object of the present attempt in Congress to enact a modified sales tax is to get the sales tax principle established here, with the ultimate purpose of securing the repeal of all income, corporation and profits taxes.

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Farmers' Dollar Cheapest in Thirty Years.—The Joint Agricultural Inquiry commission in its preliminary report to Congress recommended that the Federal government affirmatively legalize the co-operative combination of farmers for the purpose of marketing, grading, sorting, processing, or distributing their products. There is an insistent demand for the enactment of this legislation coming in upon Congress from all parts of the country.

Some interesting information is contained in the report of the commission in regard to the farmers' dollar. "Measured in terms of purchasing power," says the report, "the farmers' dollar in 1920 was worth 89 cents. In May, 1921, it was worth 77 cents. During the last twelve months it has been worth less than in any preceding twelve months in thirty years.

"The average income received by a farmer for his labor, after deducting the return of 5 per cent on his property investment, is below the average earnings of employes in many other industries," according to the commission. "The average reward per farmer for labor, risk, and management, after allowing 5 per cent return on the value of his investment, in 1909 was $311. In 1918 it was $1,278, and in 1920 it was $465. Measured in terms of purchasing power, the farmer's reward in 1909 was $326; in 1918 it was $826, and in 1920, $219. The average reward of employes in the mining industry in 1909 was $590; in 1918 it was $1,280. Measured in purchasing power, it was $618 in 1909 and $808 in 1918. The average yearly earnings of employes in rail transportation in 1909 was $773, and in 1918 $1,532. Measured in terms of purchasing power, the earnings of rail transportation employes was $682 in 1909, and $882 in 1918. If the farmer in 1918 had been employed in mining, he would have received a wage of $1,280, or about what he received for labor, risk, and management on the farm. Had he worked as an employe of a railroad or bank and obtained the average wages of an employe in either industry, he would have received more for his labor than he received for risk, management and labor in 1918 on the farm."

While measured by the standard of purchasing power of his products, by the absolute prices of farm products as compared with the prices of other commodities, by the test of quantity output or the test of income and rewards for capital invested and labor employed, agriculture in 1920 and in 1921 was relatively worse off than other industries, agricultural leaders, economists and other close observers of the trends of events all tell me that they are convinced that the crisis in agriculture has been reached and that a better day is ahead for the farmers. It is even suggested that the present disastrous period from which we are just now emerging has had the effect of focusing the attention of the entire nation on the needs of agriculture to such an extent that reforms will be obtained which will permanently benefit agriculture, giving farming the recognition it deserves as the basic industry of our civilization.

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Committee Drafting New Tariff Bill.—Hearings on the Fordney tariff bill before the Senate finance committee are now over, and the committee is at work drafting a bill to meet the ideas of the members. It is expected that the bill will not be ready for action by the Senate for several weeks. Senator Smoot a member of the committee, explains the delay by saying: "We are confronted with the task of writing the most difficult tariff bill in the history of the country. So many conflicting elements enter the work that it seems almost impossible to agree on schedules for many articles which will not work great hardships or injustices to a large number of persons." There has been much discussion in regard to the American valuation plan, with considerable opposition, but it can be quite definitely stated that American valuation will stand, with the probable clause added which provides that the President or Federal tariff commission shall have authority to raise or lower duties within certain limits to meet changing conditions of trade and foreign exchange.

There was a wide difference of opinion on the potash tariff question. The National Grange representatives opposed the tariff on potash on the grounds that it would compel the farmers to pay $50,000,000 extra, in order that the American "war baby" potash industry could receive a $10,000,000 benefit.

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Public Work During Periods of Depression.—A bill introduced in the Senate by Senator Kenyon of Iowa, "to provide for future cyclical periods of depression and unemployment by systems of public works," has been reported out favorably by the Education and Labor committee, and Senator Kenyon says he will seek early action on the bill. The Kenyon bill provides a system whereby public works and projects of the Federal government may be undertaken during periods of industrial depression, when labor and capital are not

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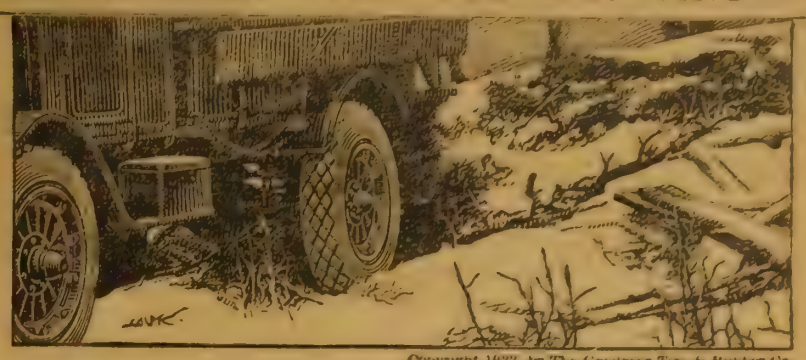
Farmer Putnam Resigns

Farmer Putnam, who has been a regular contributor to Western Farm Life for the past five years, has decided to accept another position and very shortly will enter upon his new duties. Consequently his very interesting and humorous comments will cease to be a regular feature of Western Farm Life. We know that this will be disappointing news to our readers who have enjoyed his philosophical comments.

The editor has begged, cajoled, threatened and shook real money in his face to induce him to continue his letters along with his new work, but all to no avail. Putnam always was a stubborn old cuss and has not improved with age. He will not even argue the matter with the editor and sticks by his first statement, "I never have tried to ride two hosses at once, and I ain't a-goin' to start in now." The only concession that the editor has been able to secure from him, is his promise to write a final letter for our February 1 issue.

We know that our readers will join us in wishing him success in his new field of work.

ON THE ROAD EVERY DAY THIS WINTER



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Chas. E. Wells Music Co.

Home of the Chickering

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CHAMPA 120. DENVER, COLO.

Which is Larger the Sun or a Cent

"Why—the sun of course" you will say. But remember—you can hold the cent so close to your eye that you lose sight of the sun.

Some baking powders can be bought for a few pennies less than Calumet — but don't hold these cents too close to your eyes—you will not be able to see the quality —the purity—the dependability of

CALUMET
BAKING POWDER

In other words, don't be deceived by a few pennies — the cheapest baking powder in price is often the most expensive.

When you buy Calumet you know that it will produce pure, sweet and wholesome bakings. You know that you use less because it contains more than the ordinary leavening strength.

Buy it—try it—be convinced.

A pound can of Calumet contains full 16 ounces. Some baking powders come in 12 ounce instead of 16 ounce cans. Be sure you get a pound when you want it.

Uses of Milk.

The solids of milk comprise protein, fat, sugar, and mineral matter, all in such form that they can be easily utilized in building and repairing the tissues and bones of the body. Milk is far richer in lime, for example, than other common foods, which makes it especially valuable for young children who need lime to build bones and teeth.

Fresh whole milk also contains all three of the vitamines, constituents of certain foods found by scientists to be necessary for the maintenance of health and normal growth. Milk fat is frequently the most readily available source of vitamine A, which children must have in order to grow and develop normally.

For infants cow's milk often needs to be artificially modified so that it more nearly resembles woman's milk, in which the fat globules are much smaller and there is more sugar.

Milk should be kept clean, covered, and cool from the time it is drawn from the cow until it is used, in order to prevent the bacteria in it from developing and causing it to spoil.

Even milk that looks clean may contain germs of such diseases as typhoid fever, tuberculosis, scarlet fever, septic sore throat, and diphtheria, if drawn from diseased cows, if handled by persons carrying the germs of these diseases, or if the utensils and containers are washed in polluted water, or if the milk is contaminated by flies.

Pasteurizing milk, or holding it at a temperature of 145 degrees F. for 30 minutes, is the best practicable method of destroying disease producing bacteria without producing undesirable chemical changes in the milk itself. Milk for general use or for infant feeding can be successfully pasteurized at home, and this should be done if there is any question about its purity.

Skim milk, although lacking in fat, is highly nutritious food, especially useful in cooking or combining with other foods. It contains practically all the protein, sugar, and mineral matter of the whole milk.

Condensed, evaporated, and dried milk may be used for many purposes in place of fresh milk when the latter is not available. For feeding children they do not, however, entirely take the place of fresh milk and need to be supplemented by fresh green vegetables and fruit juices.

The fat in cream and butter is very thoroughly and easily digested and carries with it relatively large amounts of the necessary growth promoting vitamine A.

Cheese contains almost all the protein and fat and much of the sugar and mineral matters of the milk from which it is made. Ordinary American or Cheddar cheese, for example, contains a far higher proportion of calcium than does any other common food.—Milk and Its Uses in the Home. (Farmers' Bulletin 1207.)

Mother Deserves a Rest.

I want to say a few words in answer to a letter signed Tired Mother which I read in your paper. I say, Tired Mother is exactly right. I have lived on a farm, but we are living in town now, and I say many of us mothers that live in town have to put up with just such things as this tired mother on the farm speaks of. Another thing I wish to speak of: I love my children with all my heart and it is not my children I wish to speak of, because as yet my children have never imposed in such a manner, but I overheard a mother several years ago say that when her children grew up she intended to rest and take life easy. Did she? No; those children married, had families of their own, and I don't believe there was a Sunday or a holiday but what that tired mother had some of her children or grandchildren to work and cook for. I heard this mother say, "Oh, I am so tired, if someone would only say once in a while, come on, mother, let's go to a show. But no, its 'Mother, will you take care of the children till we go here and there,' and I work harder now than I ever did when I was younger."

What I want to say is, children, when you are married and have your own home, don't forget father and mother. Invite them over for dinner real often. It sure rests mother and oh, how good a meal away from home tastes once in a while. Mother just loves to have children and the grandchildren come home. Yes she does, but don't let mother do all the entertaining. She has raised her family and earned and deserves a rest and a little consideration.—A Subscriber, Wyoming.

The Rural Household

Questions about home problems promptly answered by letter and through the magazine. Letters from women containing helpful suggestions for improvement of rural life are always welcome. Address all communications to Editor Home Department, Western Farm Life, Denver, Colorado.

Friendship.

I have so much to thank you for
  At which you may not even guess;
Although that does not matter, nor
  Do I give thanks the less;

A happiness in little things,
  The hope that bids my courage rise
And passes like a whirr of wings
  Cleaving the sullen skies.

Because—ah, just that you are you
  And promise you will be my friend,
I laugh at Time, and work anew
  Henceforth until the end.

My path is crossed with amber light;
  The loneliness of soul is passed;
From now there comes no dreamless night;
  My spirit is made fast.

We may be all the world apart,
  Tossed far amidst that world's affairs;
Hiding your friendship in my heart,
  I know that someone cares.

All this, my friend, you cannot know;
  There is so much I dare not say;
My heart is far too full, and so—
  I go upon my way.
— Sybil Grant in The London Times.

To Make Shoes Waterproof.

Waterproofed leather boots and shoes protect the feet in rain or snow. For waterproofing nothing better than the simple formulas is known to the United States Department of Agriculture. While the department believes that these formulas do not infringe on any existing patents or pending applications for patents, it can assume no responsibility in the matter.

Formula 1—	
Neutral wool grease, ounces	8
Dark petrolatum, ounces	4
Paraffin wax, ounces	4
Formula 2—	
Petrolatum, pound	1
Beeswax, ounces	2
Formula 3—	
Petrolatum, ounces	8
Paraffin wax, ounces	4
Wool grease, ounces	4
Crude turpentine gum (gum thus), ozs.	2
Formula 4—	
Tallow, ounces	12
Cod oil, ounces	4

Our Fashion Service.

All patterns 12 cents each. Address Western Farm Life, Pattern Department, 1518 Court Place, Denver, Colo.

Read This Before Ordering: Patterns ordered through this magazine are mailed promptly from the factory at Brooklyn, N. Y., and arrive in 10 to 12 days from time order reaches Western Farm Life. Be sure to specify size and number of patterns. Write your name and postoffice address plainly to avoid delay. These patterns are handled at cost, as a service to our women readers. The price of 12 cents includes postage.

3832—Jaunty Frock for Growing Girl. Simply made and finished with artistic embroidery; this model cannot fail to please any girl in her 'teens." In velveteen, serge, or wool jersey it will be serviceable and quite smart. The closing is under the left side of the flat panel. This is a splendid design for the use of two materials. The pattern is cut in sizes 8, 10, 12 and 14 years. A 12-year size requires 2⅞ yards of material 36 inches wide.

3026—Serviceable Model. Comprising a smart middy blouse, which may be finished to the waist line only, and a pair of comfortable, neat bloomers, cut with ample fulness. For the blouse, one could use madras, linene, linen, serge or flannel. For the bloomers, serge, cashmere, brilliantine or sateen is desirable. The pattern is cut in sizes 8, 10, 12, 14 and 16 years. It requires 3¾ yards of 27-inch material for the blouse and 3⅜ yards for the bloomers, for a 12-year size.

3810 — Unique Jumper Style. Very charming and withal up-to-date is this attractive design. The simple lines will appeal to all home dressmakers. The sleeve may be finished without the puff. This style is good for jerseys, tricotine, serge, satin, velvet, duvetyn, changeable taffeta, gabardine and broadcloth. Pattern is cut in sizes 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 2⅜ yards of 27-inch material for the guimpe, 4⅜ yards for the dress for a medium size. The width at the foot is 2 yards.

3822, 3795 ,3838—Comfortable, Practical Style, and Utility. What could be more desirable for sports use or general wear, than a suit as here depicted? Comfortable knickers to which a simple blouse is joined, and over which a smart skirt is buttoned, topped by a jaunty jacket, with convertible collar, and neat pockets. Not only for golf and other sports are knickers popular; they are filling a long felt want in general dress lines. The skirt may be finished with a "button closing" in front, or only trimmed with buttons. Any blouse may be used with the "knickers" in place of the one attached, and the knickers are "good" to wear with any skirt or one-piece dress. Serge, velours, duvetyn or gabardine may be used for all models illustrated, or blouse and bloomers may be of silk, satin or crepe and skirt and jacket of wool or cloth, velvet or ratine. The skirt—3795, is cut in sizes 24, 26, 28, 30, 32, 34 and 36 inches waist measure. The width at the foot is 2 yards. The jacket—3838, is cut in sizes 34, 36, 38, 40, 42, 44 and 46 inches bust measure. The knickers and blouse —3822, cut in sizes 34, 36, 38, 40, 42, 44 and 46 inches bust measure. To make this suit for a medium size will require 5 yards of 44-inch material for the skirt and jacket. The blouse will require 2¼ yards and the knickers 2⅝ yards of 36-inch material. This illustration calls for THREE separate patterns.

3827—Popular Suit for Small Boy. The blouse suit is the one most universally becoming to the little fellow. This model has a smart inserted pocket and pleasing collar. The style is good for serge, twill, mixtures, corduroy, khaki, and also for wash materials such as

gingham, drill, seersucker, galatea and linen. Cut in sizes 3, 4, 6 and 8 years. A 4-year size requires 1¾ yards of 27-inch material for the blouse and 1⅛ yards for the trousers.

3830—Simple Frock for Little School Girl. The desirable qualifications of being easy to cut and easy to make are shown in this model. The long waisted lines and plaited skirt are in "good style." Taffeta or serge is suggested for this model; it also is good for gingham, chambrey, percale and suiting. Pattern it cut in sizes 4, 6, 8 and 10 years. A 6-year size requires 2¾ yards of 36-inch material. Embroidery, braid, or ribbon will be nice for decoration.

3837—Straight Line Frock. There are no boundaries to smart versions of this popular style. In this instance the model simulates attractive redingote lines. The effect is becoming to slender as well as mature figures. Tricotine and satin could be here combined, or velvet and satin. Velvet with braiding would be nice, or broadcloth, with bands of krimmer. The pattern is cut in sizes 34, 36, 38, 40, 42, 44 and 46 inches bust measure. The width at the foot is about 2 yards. To make the dress for a 38-inch bust measure requires 4¼ yards of 40-inch material.

3578—Easy to Make Apron. Cut in sizes small, 34—36; medium, 38—40; large, 42—44; extra large, 46—48 inches bust measure. Medium size requires 1⅝ yards of 27-inch material. Gingham, seersucker, chambrey, lawn, drill, percale, alpaca, and sateen may be used for this style.

Profitable Farm Poultry

W. E. VAPLON.

Questions about the farm flock promptly answered by letter. Free advice on all phases of poultry production. Address all inquiries to Poultry Department, Western Farm Life, Denver, Colorado.

Ration for Laying Hens.

Following is the Cornell ration for laying hens, with directions for feeding:

Scratch Grain (Formula 200)

500 pounds cracked corn.
200 pounds barley.
200 pounds wheat.
100 pounds heavy oats.

Feed by hand morning and afternoon in deep straw litter.

Mash Mixture (Formula 201)

100 pounds wheat bran.
100 pounds wheat middlings.
100 pounds corn meal.
100 pounds ground oats or ground barley.
100 pounds meat scrap.
3 pounds salt.

Feed dry in hopper.

Amount—Feed according to the appetite of the birds; no definite rule can be given. Feed scantily of grain in the morning and give all the grain they will eat in the afternoon in time to find it before dark. There should be no grain in the litter at noon; when found, it indicates feeding too much in the morning.

In general, feed by weight two or three parts of grain to two parts of mash. When the birds are laying heavily they should consume a larger amount of mash.

Litter—Induce exercise by feeding all grain in dry, clean straw litter, 6 to 8 inches deep. The common straws, in their order of desirability, are wheat, oat, barley, rye and buckwheat, shredded or cut cornstalks; shavings or leaves may be used where straw is not available. All feed and litter should be strictly clean and free from mustiness, mold or decay. Serious losses frequently occur from these sources, due to the spores which may develop into fungus molds in the lungs or intestines.

Green Feed—A green range of alfalfa, clover or grass furnishes the ideal condition. When these are not available it is necessary to give the birds some kind of succulent food. Mangel beets, cabbage, sprouted oats or green clover are usually considered the best green feeds. If these are not obtainable, apples and potatoes make a valuable addition to the ration. Feed at noon in such amounts as the birds will clean up before night. This will require about 35 to 40 pounds per week for 100 hens. Decayed or frozen feeds should not be used, as they are a common source of digestive disorders.

Grit and Oyster Shell—Hard, sharp grit is necessary for grinding feed; oyster shell to supply lime for egg shells. Neither will replace the other.

Water—One dozen eggs contain about one pint of water. Clean, fresh, pure water should be kept constantly before the hens and should be renewed at least once daily.

Moist Mash.—Recommended only to hasten the development of late hatched pullets or to help in keeping up egg production of hens in late summer, especially those which are not to be used for breeders the following spring.

Breeds—This ration is recommended for all breeds, but it is to be varied as to the method of feeding. In the case of heavier varieties, feed more scantily of grain in the morning and so encourage exercise.

Substitutes and Additions—All substitutes or changes in the ration should be made gradually.

Shrunken or feed wheat is recommended in place of milling wheat because the latter is needed for human consumption. In nutrient value, feed wheat is between wheat and wheat screenings. Wheat screenings are often loaded with weed seeds and dirt, but good screenings may be used if the price is low enough.

Mustiness in feed wheat, wheat screenings or any feed may be detected by taste or odor. The odor is made more apparent by the application of moist heat. Hold the sample in the closed hand for a few minutes or pour hot water on the sample. Musty feeds are dangerous.

Buttermilk or skimmed milk may be used in place of meat scrap, allowing about 12 to 14 quarts per 100 hens per day.

Green cut bone is a very stimulating feed and should be used with care. It is not safe to feed unless it is fresh. If fed in amounts of about one-half ounce per hen per day, it may be used to replace half of the meat scrap.

Clover chaff, either dry or steamed, is relished by the hens and may be advantageously used to add variety to the ration.

Cornell Chick Ration.

The chick feeding ration developed by the poultry department of Cornell University is as follows:

This ration will not give the best results unless the chicks be given range on fresh sod and have provision for shade:

The Ration.

Grain Mixture No. 1 (Formula 202)—
5 lbs. cracked corn (fine).
3 lbs. cracked wheat.
2 lbs. pinhead oats or oat flakes.

Grain Mixture No. 2 (Formula 204)—
6 lbs. cracked corn (medium),
4 lbs. wheat.

Grain Mixture No. 3 (Formula 200)—
500 lbs. cracked corn.
200 lbs. barley.
200 lbs. wheat.
100 lbs. heavy oats.

Mash Mixture No. 1 (Formula 203)—
2 lbs. wheat bran.
1 lb. wheat middlings.
1 lb. corn meal or hominy.
1 lb. sifted meat scrap (best grade).

Mash Mixture No. 2 (Formula 205)—
2 lbs. wheat bran.
1 lb. wheat middlings.
1 lb. corn meal or hominy.
1 lb. ground oats.
1 lb. meat scrap.

Mash Mixture No. 3 (Formula 201)—
100 lbs. wheat bran.
100 lbs. wheat middlings.
100 lbs. corn meal.
100 lbs. ground oats.
100 lbs. meat scrap.
3 lbs. salt.

The Method: One Day to Two Weeks—Grain mixture No. 1 fed in litter three times a day. Mash mixture No. 1 moistened with sour skimmed milk fed twice a day. Combine chopped green food with the mash.

Two to Six Weeks—Grain mixture No. 1 fed in litter twice a day. Mash mixture No. 1 moistened with sour skimmed milk fed once a day. Mash mixture No. 1 (dry) available one-half day.

Six to Twelve Weeks—Grain mixture No. 2 fed in litter three times a day. Dry mash (mixture No. 2) always available.

Twelve Weeks to Maturity—Grain mixture No. 3 fed in litter twice a day. Mash mixture No. 3 hopper fed. One meal of moist mash if it is desired to hasten development.

Further Directions:

1. Skimmed milk is considered indispensable for chicks during the first week. In order to insure that all chicks get the milk it is advisable to dip the chick's beak in milk before it gets any other food. (This can best be done when removing chicks from the incubator.) Give milk to drink as long as it is available.
2. Feed the grain mixture with bran and grit in a trough on the first day. Afterward feed grain alone in the litter.
3. Do not overfeed. The chickens should always be waiting and ready when the next feeding time comes.
4. Promote health by inducing the chicks to exercise and keep busy.
5. Provide fine grit and charcoal from the start.
6. Keep the water fresh and clean.
7. Make all changes gradually.
8. Give grass range or plenty of green food.
9. Get the chicks out of doors as soon as possible.
10. If the chicks fill up on dry mash, do not exercise and are not hungry for the grain feeding, remove the mash part of the time.
11. Feed moist mash sparingly.
12. Feed only good grade, wholesome feeds.

$10.00 FREE TO POULTRY RAISERS

If you are making money out of your farm poultry, see page 14.

Lice and mites thrive only at the expense of the poultry; anybody can choose whether to raise vermin or chickens.

BABY CHICKS Fifteenth Annual Season. Book your order with us. All leading varieties from best selected Hoganized flocks. The kind that's bred to lay. With years of experience at the business and the proper equipment to meet your requirements we can give you best service. Write for price list. *Shelton Poultry Co. Box 3 Alcott Sta., Denver*

64 BREEDS Most Profitable pure-bred Northern raised chickens, ducks, geese, turkeys. Fowls, eggs, incubators at reduced prices. 29th year. Largest plant. Large valuable poultry book and catalog free. R. F. NEUBERT Co., Box 853 Marshall, Minn.

500 Pullets Lay 22,660 Winter Eggs

In November, December and January.

Eggs sold to the market for $1,400, and produced with $250 worth of feeds..... **$1150 Profit in 3 Months**

THEY WILL DO THE SAME FOR YOU when WINTER EGG PRODUCTION IS BRED INTO THEM. RESULTS ARE CERTAIN. If you get the WINTER EGGS and BIG PROFITS you must have FRANTZ'S BRED-TO-LAY-IN-WINTER LEGHORNS. Hatching eggs Guaranteed Fertile and 50,000 Strong Chicks you can Depend Upon, from our 1,800 Tested Winter Laying Hens. Also stock. Come and see us. Catalog free. Write

Osee C. Frantz, Box F, Rocky Ford, Colo.

Special prices to early buyers on large chickens.

PLACE Your Order Now for **EGGS OR BABY CHICKS**

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S. C. W. LEGHORNS

The FOWLER EGG FARM STRAIN OF LEGHORNS has been bred for eggs, Hoganized and type-tested for so many years that they will give you a LARGER FLOCK AVERAGE of big white eggs and make you more real money than any other strain of Leghorns in the west. Our customers say so when sending back year after year for more eggs and chicks from The Fowler Egg Farm. A customer at Avondale, Colo., writes: "Can I get 500 chicks in March? I bought 500 from you last year; raised 238 pullets and 221 cockerels. I had 2,000 chicks in all from four other poultry farms. Your chicks were by far the best and healthiest that I received. I cannot say too much for the QUALITY of your stock; they are just as fine as can be had." These kind of letters and repeat orders are what count. There is a reason.

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40-Acre Breeding Farm

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BLAKELAND BUSINES LEGHORNS. Origin, D. Tanered Strain, the heaviest laying strain in America.

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Place your orders now for EGGS, CHICKS, PULLETS, COCKERELS, PAIRS, TRIOS and PENS at BARGAIN PRICES.

Write for Catalogue B.

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Rhode Island Reds

Early hatched vigorous birds from the noted ROMOCO Strain of heavy producers—bred up by "The Jack Monroes."

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$10.00 FREE TO POULTRY RAISERS
If you are making money out of your farm poultry, see page 14.

TURKEYS.

TO EXCHANGE—YOUNG PURE-BRED WHITE Holland toms for tom or hens. Ralph Smith, Carlton, Colo.

IDEAL MAMMOTH BRONZE UNRELATED TOMS, 20—32 lbs., $10—$20; hens, $6—$8. Scott Linville, Lamar, Colo.

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REGISTERED HEREFORD BULLS—DOMINO-Anxiety bred. Priced to sell. Mrs. Mattie Flowers, Moriarty, N. M.

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ONE BLACK IMPORTED REGISTERED PERcheron stallion for sale or exchange. Enos Plessinger, Cheyenne Wells, Colo.

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ORION CHERRY KING 15TH BOARS OUT OF Defender sows will put extra dollars in your hog lot. The price is right. J. O. D. Ranch, Aroya, Colo.

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SACRIFICING 34, 80 OR 120—GEORGE WORtham, Worland, Wyo.

WANTED—TO HEAR FROM OWNER OF LAND for sale. O. K. Hawley, Baldwin, Wis.

OKLAHOMA FARMS—WRITE FOR FREE AGricultural booklet. Board of Commerce, Shawnee, Okla.

FOR SALE OR TRADE—IMPROVED HALF SECtion, with water; good reasons for selling. J. E. Harron, Alamosa, Colo.

CASH BUYERS WANT FARMS, SPRING DELIVery, from owners only. R. A. McNown, 334 Wilkinson Building, Omaha, Nebr.

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Questions About the War Finance Corporation Answered.

(Continued from Page 4.)

money on his stock in order to take care of his present obligations?

Yes. Through a bank or loan company.

Can a farmer who is a tenant with but a one-year lease borrow money from the War Finance Corporation?

Yes. Being a tenant will not militate against him.

Can loans be secured upon grain? hay? potatoes? wool? etc.

Yes.

Does the War Finance Corporation in passing on applications take into consideration the value of "moral risk?"

Yes. The War Finance Corporation is performing a service of relief in the present period of economic depression. It fully appreciates the value of moral risk, as well as the value of previous experience of the applicant and his ability to carry his obligation through to a successful conclusion. Yet, while the Corporation is prepared to go farther in this respect than is possible for a banking institution operating under the established state and federal banking laws, it must not be construed that the Corporation can or will set aside fundamental principles of prudence and judgment in making advances. Sound business principles must govern.

The Rate of Interest.

What rate of interest is charged?

The interest rate will be determined from time to time by the Board of Directors. The present rates are 5% to

(Turn to Page 14.)

WANTED—MEN, WOMEN, OVER 17, COMMENCE $90 to $135 month. Raise to $190. U. S. Government steady positions. Short hours; paid vacations; pleasant work. Common education sufficient. Write immediately—today—for free list positions now open. Franklin Institute, Dept. W125, Rochester, N. Y.

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PATENTS—BOOKLET FREE. HIGHEST REFerences. Best results. Promptness assured. Send model or drawing for examination and opinion. Watson E. Coleman, Patent Attorney, 624 F St., Washington, D. C.

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TOBACCO.

HOMESPUN CHEWING AND SMOKING TOBACco, 5 lbs. $1.25; 10 lbs., $2.50; 20 lbs., $4. Farmers' Union, Mayfield, Ky.

TOBACCO—KENTUCKY NATURAL LEAF CHEWing, 10 lbs. $3; 20 lbs., $5; smoking, 10 lbs., $2.50; 20 lbs., $4. Walter Veal, Agt., Sedalia, Kentucky.

TOBACCO—NATURAL LEAF, SWEET AND mellow hand-picked chewing or smoking, 5 lbs., $1.50; 10 lbs., $2.50. Smoking, 20 lbs., $4. Furnish free recipe for preparing. Quality and delivery guaranteed. Farmers' Tobacco Exchange, Sedalia, Ky.

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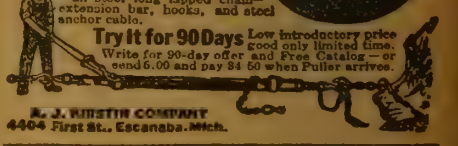

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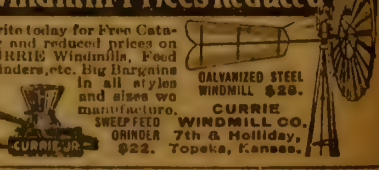

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If you are making money out of your farm poultry, see page 14.

Dairying and Hog Raising

All letters regarding commercial and technical features of dairy farming and hog production promptly answered. Address all communications to Dairy Department, Western Farm Life, Denver, Colorado.

Meditations of a Scrub Bull.

They call me a scrub bull; yet I have a pedigree. I was sired by a scrub, dam'd by a scrub and am treated like a scrub, and I sometimes think that I am owned by a scrub. My tribe outnumbers purebred bulls four to one. Just why I should exist is a mystery to me. Yet, I am not responsible for it. I was brought into the world without my consent and I shall probably leave it against my will. In the meantime I am getting the most vicious publicity, principally through the farm press. They say I am a renegade and an abomination, and should be exterminated. Dairymen passing my owner's farm look at me with contempt; even the cows show me no respect. My own daughters seem to hold a grudge against me, saying that I am responsible for their low production. I cannot argue the point, for it is true. But what can I do? My owner must think a lot of me personally, or he would not continue to support me, knowing that I can never improve the quality of his herd or be a source of profit to him. These cow testing associations are certainly showing me up, and I can see the handwriting on the wall. My tribe is doomed! Under the keen competition and low prices of good purebred bulls there will soon be no place on the farm for me. So, good-bye. I may be gone but not forgotten, for I have retarded the development of the dairy industry for many years.—J. E. Dorman.

Hogs Needed on Dairy Farms.

A survey of 128,374 dairy farms show nearly 90 per cent raised hogs; 89.7 per cent, to be correct. Of this number 79.42 per cent were owned by the men living on them and averaged 215.3 acres on 66.59 per cent of which were modern hog houses.

Because skim milk and buttermilk are high in their digestible protein and carry a good bit of mineral matter, they give best results when combined with such feeds as corn and barley. Fortunately the carbohydrate feeds with which these by-products combine so well are those found most largely in the sections where dairying is well developed. Combinations of skim milk with other protein supplements such as oil meal, middlings, and tankage, show skim milk to have a considerable advantage, gains being larger and more economical than with the other nitrogenous feeds.

The latest dairyman of note to add hogs to his dairying, is former Governor Lowden of Illinois. A Holstein breeder for years, and recently elected president of the Holstein Association, he has accumulated a fine herd at his Sinnissippi Farm, just out of Oregon, Ill. A short time ago he employed Lee M. Gentry, only son of N. H. Gentry, the well-known Berkshire breeder, Sedalia, Mo. The training Lee received at the hands of his father qualifies him for a herdsman of outstanding ability. The foundation for a herd has been laid in seven sows and a boar from the Gentry farm, which carry the blood of all the great boars Mr. Gentry ever bred or used, including Longfellow, one of the noted boars of the breed. With the milk by-products from the Holsteins, Governor Lowden will no doubt have some fine hogs.

It is difficult to put an exact valuation on skim milk as a supplemental feed with pigs. The rule which has often been laid down by Hoard's Dairyman is as follows: To find the value of 100 pounds of skim milk when fed alone, multiply the market price of live hogs in cents per pound by five. If fed in combination with corn or barley, multiply by six.

Another common valuation is to consider 100 pounds of skim milk worth the price of one-half bushel of corn in hog feeding. In some experimental work it has been shown that when corn has a valuation of $30 per ton, skim milk is worth 46 cents per 100 pounds. With corn worth $60 per ton, this valuation on skim milk would be doubled, making it 92 cents per 100 pounds.

In a 125-day feeding trial at the Massachusetts Agricultural College and in two 62-day trials at the South Dakota Experiment Station, it has been found that buttermilk of good quality is just as valuable in feeding pigs where the cereal is corn.

It would appear as the better part of wisdom that every dairyman should have some hogs.—Jas. E. Downing.

Treating the Labor Right.

St. Joe valley is in northern Idaho, in Benewah county. St. Joe river flows through it, and the lowlands on each side of the river banks are of a silt formation as fertile as the Nile valley in Egypt, judging from the crops raised by some of the farmers there. Part of the valley is in the Indian reservation. Part of it was homestead land or timber claims which included the lowland. To obtain water power, a dam had been built farther down the river, with the result that water backs up the valley part of the year, submerging some 10,000 acres of land.

We visited a dairy farmer in this valley, says Chris Johnsen, Dairy Manufacturing Specialist of the Western Office of the Dairy Division. This farmer with others had constructed a dike to keep the water off the land, at a cost of about $102 an acre. He kept 26 Holstein cows on his 80 acres, and he claimed he could double the number and feed them on this land. He had sold 100 tons of hay, and his oat field had yielded 110 bushels of oats per acre. The president of a local bank also told of the enormous yields of oats and hay.

The farmer visited had a spring with capacity to fill an inch-and-a-half pipe, the water being of a temperature of 46 degrees. He had built a fine milk house with a cooling tank in which he could keep his cream cans sunk, and thus hold his cream in very good condition. He had a set of fine buildings on the place.

Taking us into the basement of the dwelling house he showed us a large billiard table. Asked what he had that for, he said: "For the boys; I would rather have them scrap here than be hanging around up town." We inquired how many boys he had, and he informed us that he had none of his own; this was for the boys that worked on the place. Afterwards, on the spacious and screened front porch we saw two fine beds, and the farmer volunteered the information that the boys always slept there in summer time. It occurred to us that here perhaps was a solution of the farm labor problem. The well made up beds would manifestly be preferable to sleeping in the hay mow to avoid the necessity of the delousing process which often has to be undergone after spending a season in a western farm bunk house. Outcast treatment is likely to produce outcasts; while if the help is treated well, they are likely to want to measure up to their surroundings.

This fertile valley, if fully utilized, would seem to be capable of making a large number of farms and feeding many hundred cows, which would suffice to support several good creameries.

Livestock Notes.

C. S. Bratt & Sons, breeders of Hampshire hogs, will hold a bred sow sale at their farm near Arapahoe, Neb., February 20. Their catalogs are now ready for distribution. Those who are interested in Hampshire hogs should not fail to write them for a catalog. They are the owners of the famous DeKalb's King 16th, 48685.

Farmers and stockmen who are in the market for bred sows or a herd boar should write John L. Brown or Harold A. Tabor, Laird, Colo., for descriptive catalogue of their combination sale of Durocs. Sale will be held at Wray, Colo., February 1. There will be offered thirty-one bred sows and seven boars. All are choice animals—the Pathfinder, Sensation, Cherry King, or Gano breeding. See sale announcement in this issue.

We are in receipt of a communication from N. E. Mosher & Son, breeders of Hampshire Hogs, Hugo, Colo., who report the following sales: One choice Hampshire sow, bred to Lookout Superb, sold to Mr. W. B. Roberts of Iola, Colo. Two very fine gilts to Mr. L. W. Harmon of Rifle, Colo. One good young boar to Mr. L. F. Calvin of Stratton, Colo. One nice boar pig to Mr. Haldo Kjosnes of Genoa, Colo. One choice young boar, sired by Lookout Superb, to Mr. K. F. Billington of Wetmore, Colo. One choice young boar sired by Lookout Superb to Mr. E. J. Elliott of Strasburg, Colo. One choice boar pig, sired by Hugo Chief, to Mr. A. D. Eggleston of Salida, Colo. The above are all breeders of purebred Hampshire hogs and know the value of the Hampshire hog.

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Sold in 1 and 3 lb. tins, 10 and 25 lb. galvanized pails. At reliable dealers everywhere.

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Sonderegger's Prizetaker Onion We find this to be the largest and handsomest Yellow Globe Onion for home or market. It grows to an immense size, but is fine-grained, mild and of delicate flavor. Fine for fall and winter use. Frank Woodfill, a Nebraska farmer, wrote: "Six Sonderegger Prizetaker Onions, set side by side, measured 22 inches. I used 100 lbs. of nitrate of soda and grew 400 bushels of Prizetaker Onions on less than one acre. They were the finest onions I ever grew."

Campbell's Early Grape — A new variety, vigorous growth, very hardy, very early and an abundant bearer. Good shipper; keeps for weeks after ripening.

Perfection Currant — In our entire experience this is the best bearer, the largest, sweetest and easiest to pick. Rich, mild flavor, less acid and few seeds.

Everbearing Raspberry — The wonderful new St. Regis. First to bear and continues till late October. Very hardy. Yields first season.

Low Prices on all kinds of Fruit Trees and Plants, Vegetables, Flower and Field Seeds; Shrubs, etc. Get our big Illustrated Catalog, sent free. (32)

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Before churning add one-half teaspoonful to each gallon of cream and out of your churn comes butter of Golden June shade to bring you top prices. "Dandelion Butter Color" costs nothing because each ounce used adds ounce of weight to butter. Large bottles cost only 35 cents at drug or grocery stores. Purely vegetable, harmless, meets all State and National food laws. Used for 50 years by all large creameries. Doesn't color buttermilk. Absolutely tasteless.
Wells & Richardson Co., Burlington, Vt.

$10.00 FREE TO POULTRY RAISERS
If you are making money out of your farm poultry, see page 14.

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$10 in Gold *to Farmer Poultry Raisers*

If you are a farmer, a farmer's wife, son or daughter, and have been making money out of a flock of poultry, we want to know just how you are doing it. We wish to show those of our readers who are not yet alive to the possibilities of poultry raising on the farm and ranch, what they are missing by not taking full advantage of the opportunity and raise more and better poultry.

We will pay $5.00

to the one writing us the best letter in which they explain how they make money out of their poultry. The second best letter $3.00, and the third best letter $2.00. Honorable mention will be made of all other letters suitable to be published.

What we want is facts

and information about raising poultry on the farm. We want this information so that other farmer readers will be able to profit by your experience. You must give your own actual experience, you cannot "borrow" the experience of someone else and write about it.

Do not fear that lack of writing ability will handicap you in competition for the prizes. The letters will be judged entirely upon value of facts that they represent.

The size of your flock is not essential. If you have a small flock and have handled it successfully, the method is just as valuable as if you had a large one. All we want is a plain ordinary letter from you.

The following are suggestions for some of the information you can supply: When you began raising poultry; how you developed your flock; the number you had a year ago; how you fed, housed and cared for them; how and when you set your hens; if you used an incubator or brooder; your experience; how you care for baby chicks; how you market your eggs and live poultry; what profit you are making; what you plan to do this year.

Your letter must reach us by February 1. The time is short; so get busy right away. Address your letter to the

EDITOR, POULTRY DEPARTMENT,

WESTERN FARM LIFE

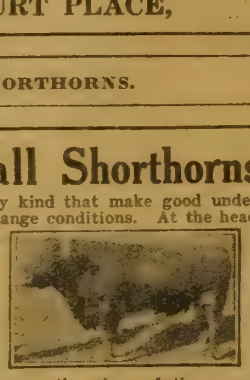
1518 COURT PLACE, DENVER, COLORADO.

SHORTHORNS.

Sam Ball Shorthorns

Are the big hardy kind that make good under the most trying range conditions. At the head of the herd is

Big Sandy



From this herd came the sires of the grand champion carlot steers at the 1920, 1921 National Western. We have for sale just what you want in both male and female animals. Prewar prices. Write us your wants.

SAMUEL BALL, WRAY, COLO.

Use a Shorthorn Bull

The Shorthorn steer is easily made ready for market at any age from calfhood to maturity, having a few extra pounds as a calf and 200 or more at maturity, and quality enough to top the market. It pays to grow Shorthorn beef. The good Milking Shorthorn cow is the most valuable farm cow. American Shorthorn Breeders' Association, 13 Dexter Park Ave., Chicago, Ill.

SUNNYSIDE ROBERT

SHORTHORNS

We have for sale cows, and cows with calves by side, and heifers. Scotch and Scotch tops. A few choice bulls left. We make 'em make good. Write us.

GLEASON & BLAZER, Kiowa, Colo

SHORTHORN BULL FOR SALE.

ADVOCATES URR, roan, calved Sept., 1919. Bred by H. F. Harmon. Sire, Imp. Advocates Model 647679. Dam, Maid Marian 138615; sire, Gladstone 239813. Dam, Merry Maid 2d 29528; dam, Nonpareil Victor 2d 258255. Dam, Merry Maid 72d; sire, March Knight 188105. Dam, Imp. Winsome Maid; sire, Marchison 192330.

H. F. HARMON, BOULDER, COLO.

We raise **SHORTHORNS**

For Both Beef and Milk.

"The Farmer's Cow"

We have never used a nurse cow on our place.

The CORNFORTH LIVESTOCK Co.

ELBERT, COLO.

SHADELAND STOCK FARM

BREEDERS OF

SHORTHORN CATTLE

Herd headed by Marwalton Rustler, a grandson of Avondale.

Chester White hogs of best breeding stock for sale. Also Ringlet Barred Rock eggs for hatching. G. W. BALL & SONS, Pierce, Colo.

HEREFORDS.

THE MARKET LOOKS PROMISING. RESTOCK NOW WITH

HEREFORDS

Some choice heifer calves and a few bulls of Beau Santos and Bright Stanway breeding are for sale.

J. D. Craighead, La Junta, Colo.

Nursing

your opportunity

Trained Nurses Earn $30 to $50 a Week

Our training school offers facilities of big, modern, standard hospital. Full three your course of instruction. Lecture and class room special courses. Diplomas acceptable to all state boards.

Pleasant, comfortable nurses' home with opportunities for recreation, rest, social and mental betterment, regardless of religious faith.

Splendid building and equipment, beautiful grounds, desirable climate, modern city.

Write at once for full information and enrollment blank.

Address Sister Superior

ST. MARY HOSPITAL

Pueblo Colorado

Salvage and Surplus Stock OF

Army Goods

Post Army Store

921 18th St. Denver, Colo.

Mail Orders promptly filled. Write for complete price list.

Have You Purebred Livestock to Sell?

Western Farm Life can find the buyers for you and at the same time build a state-wide reputation for your herd. A good many successful breeders have put their selling problems up to our Breeders' Department and are glad they did so. It is paying them in dollars and cents.

Write for literature giving full information regarding the circulation of Western Farm Life in each county, the cost of advertising, the cost of livestock cuts and other valuable information. Address

BREEDERS' DEPARTMENT,

Western Farm Life

1518 Court Place,

Denver, Colo.

D. S. Polled Herefords

Cows from Polled Plato, herd headed by POLLED SUCCESS A 3rd. Young bulls and heifers for sale.

Smith Livestock Co.

CHIVINGTON, COLO.

From the Nation's Capital.

(Continued from Page 9.)

fully employed in private industry, and a smaller percentage of such projects shall be undertaken during periods when private industry is competing for labor.

Thomas H. MacDonald, chief of the Bureau of Roads, appearing before the committee on the Kenyon bill, said the number of automobiles and motor trucks registered in the United States increased from 501,000 in 1910 to 9,750,000 in 1921, while the expenditures for highways increased from $120,000,000 in 1910, to $286,101,000 in 1918, and to $600,000,000 in 1919. These figures show that we have neglected to provide for new highways and maintenance in the years of vast increase in motor vehicles, making necessary large appropriations for roads in the next ten years.

::::

Bill Intended to Promote Better Forestry.—The Snell-McCormack bill, on which hearings are now in progress, is regarded by forestry specialists as a long step in the direction of better forestry and it has the indorsement of the forestry officials in the Department of Agriculture. This bill provides through co-operation between the Federal government, the states and the owners of timberlands, for adequate protection against forest fires, for reforestation of denuded lands, and for extension of national forests.

::::

Problems Before Good Roads Congress.—In announcing the call for a good roads congress to be held in Chicago, January 16 to 20, H. E. Bowlby of the Federal Bureau of Roads, says that 85 per cent of American roads are yet to be improved. It is not now a question of raising the money required to build the good roads so much as it is the problem of spending wisely the large sums available in every state for this purpose. The passenger automobile and motor truck industries are absolutely dependent for their stability upon good roads. In establishing our highway systems and in building our roads the motor traffic of the future must be gauged and ample provision made for a rapid increase in the volume and weight of highway traffic. Our highways must be planned to meet future rather than present needs, and built—not for a day—but for all time.

::::

To Provide Help for Dry-Land Farmers.—Two or three bills have been introduced in the Senate in aid of the western dry-land farmers whose crops have failed. A bill introduced by Senator Curtis of Kansas, defines a yield of five bushels or less per acre of wheat, rye, or oats, on lands owned by those in drouth-stricken regions who borrowed money from the government for the purchase of seed grain, as a failure, and the borrower whose yield was five bushels or less per acre is released from re-payment of the amount borrowed by him from the government.

Senator McCumber has introduced a bill setting aside $5,000,000 from which farmers in sections where crops fail can borrow for the purchase of seed grains to the maximum of $300 each, and another bill would reimburse farmers who received loans from the government in 1918 under the seed purchase fund, and who later borrowed from private sources to repay the government advances.

::::

LaFollette's Charges Not Substantiated.—The charges made by Senator La Follette to the effect that representatives of agricultural organizations had, at a secret meeting in Washington, December 9, entered into an agreement favorable to the railroads and inimical to agriculture, are misleading, unjust, and not substantiated by the facts. In a statement relative to this matter, W. I. Drummond, chairman of the Board of Governors of the International Farm Congress, says that the farm organizations represented were the National Grange, the American Farm Bureau Federation and the International Farm Congress. "The agricultural representatives did not agree to abandon the fight for the repeal of the guaranty clause of the present transportation act. On the contrary, they held out uncompromisingly for such repeal, and for the abandonment of the principle upon which the guaranty is based."

Continuing his statement, Mr. Drummond says: "This fight for reduced railroad rates has been conducted largely by the American Farm Bureau Federation. The National Grange has participated to a somewhat less extent, while the Farm Congress, being purely an educational association and seeking to avoid controversial matters as much as possible, has been represented at only a portion of the many conferences held on various problems during the past year. I feel free to state that any reflections upon the good faith of the Farm Bureau Federation and Grange representatives are most unfair. Their loyalty to the farmers' every best interest is unassailable. I do not believe Senator LaFollette desires to see those great organizations disrupted by the sowing of seeds of suspicion, and distrust of their leaders. His charges were undoubtedly based upon misinformation."

("From the Nation's Capital" by E. E. Reynolds, is now a regular feature. Look for it in the next issue of Western Farm Life.)

Questions About War Finance Corporation Answered.

(Continued from Page 12.)

6%. No bank is permitted to charge in excess of 2% above this rate.

Are any other fees or commissions charged?

No.

Does the applicant have to pay anything for making application?

No.

Is there much "red tape" connected with the making of applications and the securing of loans from the War Finance Corporation?

Certain forms and papers are obviously necessary in the transaction of business with the War Finance Corporation and, while they may look formidable on first presentation to a layman, they are nevertheless quite simple and are reduced to a minimum compatible with the information which is essential.

Is there any time limit as to when applications for loans must be made?

Yes. The limit is July 1, 1922. The Act fixes this date, after which no further applications will be received.

How long does it take to get a loan through after making application?

Loans have been carried through in eight days, although there is no established rule on this question. The committee, as well as the board at Washington, is making every effort, however, to expedite and speed up applications, even to the liberal use of the telegraph.

For what length of time will a livestock or agricultural loan be made?

Loans are made for a period not exceeding one year, but the Corporation may from time to time extend the time of payment, although it shall not be extended beyond three years from the date upon which the original advance was made.

Can loans be repaid at any time?

Yes. Payment of all or any part of an advance may be made at any time prior to maturity. Interest will be adjusted in each case to the date upon which a payment is received by the War Finance Corporation.

The Colorado Corporation.

What is the "Livestock Finance Corporation of Colorado?"

This is a corporation now being organized upon a state-wide basis to function under the Act upon an interpretation of the Act whereby the term "bank, banker or trust company" includes any reputable and responsible financing institution incorporated under the laws of any state or of the United States, with resources adequate to the undertaking contemplated.

Where is its headquarters?

On the third floor of the Exchange building, at the Union Stockyards in Denver.

Does it confine its operations to any one section of Colorado or to any one class of farmers or stockmen?

It does not. It will accept applications from any section of the state and upon any class of agricultural collateral as defined in the War Finance Corporation Act, considering all applications upon their merits and recommending to the Colorado Committee of the War Finance Corporation accordingly.

Can the individual borrower get money through this livestock finance corporation of Colorado, and if so, upon what terms?

Applications from individuals will be received and when such applications receive favorable action, the terms of the loan will be as have been outlined elsewhere in these pages as being the terms set forth by the Act.

Are there any other associations of this kind in Colorado?

Yes. Any livestock or agricultural loan company could qualify.

What is the relation of this livestock finance corporation of Colorado to the War Finance Corporation as compared with a bank?

It has the same relation as if it were an individual bank. It is simply another avenue, in addition to the local bank, through which the individual borrower may approach the War Finance Corporation.

It is contended that agriculture is over-loaned now. Is a general utilization of War Finance Corporation money simply postponing the day of liquidation?

Not in the sense that is implied. If all borrowers would be forced to liquidate simultaneously such a contention would be justified; such will not be the case, however. Some who are in better condition than others are liquidating daily. This will continue even without War Finance money. Others will liquidate at the end of a six months' loaning period and the rest will be scattered over the three-year limit set forth in the Act. The result of generous participation in the opportunity offered by this Act will be to spread liquidation out over the next three years.

$10.00 FREE TO POULTRY RAISERS

If you are making money out of your farm poultry, see page 14.

HOLSTEINS.

Only One Bull Left

Just one bull of serviceable age is left for sale in our herd. His dam made 15 pounds of butter as a yearling and will be tested for year's work this fall. She is a wonderful milker and the daughter of a 4-year-old with a year record of 25,208 pounds of milk and 878 pounds of butter, while the granddam of the bull's dam milked 108 pounds of milk in one day and 3,100 in 30 days. Two direct generations of 100 pound cows back of him. He is a good individual, mostly white, and sired by Denver Sir Segis, a 30-pound son of our senior herd sire, Johan Duchess De Kol Lad. What will this bull be worth to some good breeder?

Sanborn Meadows Holsteins.
MRS. R. G. DOUGLAS,
Rush P. O., Colo.

4 Registered Holstein Bulls

FOR SALE—One 3-year-old; three 2-year olds. Three are direct descendants of Pontiac Korndyke 25982, and the fourth carries Dirkie, DeKol, Aaggie and Nemea strains. For further information address

THE NILES FARMS,
706 Kittredge Bldg. Denver, Colo.

We have bred hundreds of prize-winning and high-producing Holstein cows, including

Tilly Alcartra

We can supply you with that same line of breeding. Write

McKAY BROS., Caddoa, Colo.

WALLIE FARM REGISTERED HOLSTEINS,
4800 S. Penn, Denver. W. G. Foster, Owner
Home of "Colorado Count," whose 29 sisters broke 140 world's records.

Bulls of Serviceable Age for Sale

Excellent individuals. World's record blood. Terms to responsible buyers. Wallie Farm bulls are guaranteed.

Buy a Calf Out of This Herd

Twenty cows in this herd on an official seven-day test averaged 446.13 lbs. of milk and 20.19 lbs. of butter.

COLORADO STATE HOME,
2505 S. Wash. St. Denver, Colo.

D'ARCY HOLSTEINS

Have made good at home and they will do the same for you. A few choice calves can be purchased now at a price that can't help but make you money. Write

NORMAN R. D'ARCY
Parker, Colo.

PRODUCTION — TYPE — SIZE

We offer you a wonderful amount of these Holstein qualities—and from a clean herd. Bull calves from fine record dams. Pahgre Valley Ranch, Loesch Bros., Montrose, Colo.

BREEDING

GREAT BARGAINS, 960 HEAD HEREFORDS, SHORTHORNS, ABERDEEN ANGUS
1, 2, 3, 4 and 5 years old. Cows, heifers and bulls. Prices $75 to $120 and up. 360 Percheron and Belgian horses, stallions, mares and colts, 1 to 6 years old. Prices $125 and up per head. One head or a carlot. Breeding guarantees with each. Registered pedigrees by mail. Stock on twenty farms in Iowa and Illinois. Write for circular and particulars. Address ILLINOIS HORSE & CATTLE CO., Good Block, Des Moines, Iowa.

GUERNSEYS.

GUERNSEYS

Sired by the Grand Champion bull at the 1921 National Western and State Fair, both male and female, are for sale. Write

H. D. PARKER
GREELEY, COLO.

JERSEYS.

A. M. McClenahan
Jersey Cattle
Duroc Hogs

GREELEY, COLO.

MILKING SHORTHORNS.

OUR BARN IS FULL OF
Record of Merit Cows

We'll sell you a few or we'll sell you their sons and daughters.

REAL MILKING SHORTHORNS
Pay their way as they grow.

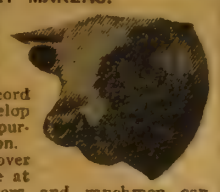
Come see us any time. We want to show you a herd of big beefy cows that are proving their dual purpose ability. All on official test.

VISIT US AT
Wonderview Farm

W. C. TEGTMEYER & SON.
Just west of Crown Hill Cemetery,
32nd AND HOWELL.
Mail Address, Box 741A, Edgewater, Colo., R. 1

Shorthorns That Milk

ARE MONEY MAKERS.



A herd that will give you a good monthly cash income is what you will need in the future. One of our young bulls from a Record of Merit cow can develop your herd into a dual-purpose paying proposition.

We know the war is over and have bulls for sale at prices that you farmers and ranchmen can afford to buy. Write for our bargain list and easy payment plan.

We will have our show herd at the Denver Stock Show, and also several young bulls for sale, priced to sell.

THE PINE VALLEY
DAIRY & FARMS CO.
Seeley G. Rose, Mgr. Colorado Springs, Colo.

J.B. Benedict, Littleton, Colo.
Milking Shorthorns

BULL and HEIFER CALVES from Record of Merit dams, sired by Royal Glenside, a pure 3ates bull out of a Record of Merit dam. Milk records established last year above 14,728 lbs. Two-year-old milking 42 lbs. per day, 1,300 lbs. per month, with first calf. Each cow tested in our herd last year went over 10,000 pounds. The calves from these cows are offered for sale at farmers' prices.

INSPECTION INVITED.

MacHurst
MILKING SHORTHORNS

Herd sire, Major Oxford 3rd.
HERD AVERAGE 1920-21:
319.1 LBS. BUTTERFAT.
J. P. McINROY, LARKSPUR, COLO.

Buy MILKING SHORTHORNS

from the oldest established herd in the state. We can supply your needs in bulls of beef type either horned or polled Shorthorns.

Write Superintendent for folder on breeding and prices.

State Industrial School,
Golden, Colo.

Bates Shorthorns

are the foundation blood of true Milking Shorthorns. We have them. A few bulls for sale.

THE CARPENTER CATTLE CO.
GREELEY, COLORADO

MILKING SHORTHORNS

All Cows in Milk Officially Tested.
Service bulls of World's Record breeding. Both males and females for sale. Personal inspection invited. Send for Illustrated Booklet.

THE BONVUE FARMS CO.,
Stockyards, Denver, Colo.

POLAND CHINAS.

Mather's Big-Type Polands

sold to breeders in four states this year are giving satisfaction.

BUY WEANLING PIGS
at prices that will surprise you.

C. J. Mather, Longmont, Colo.

REMEMBER MY
Public Sale of Polands
Thursday, January 26, 1922.

40 head registered Poland Chinas. Bred to my famous herd boars. Some choice daughters of Max Giant Bob.

A. D. McGILLVRAY,
ROUTE 1. BOULDER, COLO.

CHOICE BIG-TYPE
POLAND CHINA PIGS

Either sex, sired by Pilot Jumbo and Yankee Lad, dams Big Giantess, Miss Imperial, and F. B.'s Big Lady.

English Barron White Leghorn Cockerels and Mammoth Bronze Turkeys.

F. B. MORGER, FOWLER, COLO.
R. F. D. No. 1, Box 18.

Duroc Bred Sow Sale

Wray, Colo., February 1, 1922

31 Bred Sows ***7 Herd Boars***

This, our first annual sale, will be held at the

Sullivan Sale Barn, Wray, Colo., February 1, 1922

Offering consists of 31 bred sows and 9 boars of Pathfinder, Sensation, Cherry King, and Gano breeding. The foundation stock for these herds were all purchased at the National Western Stock Show at various times and many of them were in the winning classes.

The sows and boars to be offered at this sale are of the correct quality and are backed up by the greatest of ancestors. Our Catalogue will give you all the information in regard to the sale.

WRITE FOR CATALOG TO

JOHN L. BROWN or HAROLD A. TABOR
LAIRD, COLORADO.

PRIZE WINNERS

See Us at the STOCK SHOW

Shorthorns, Herefords, Guernseys, Holsteins, Jerseys, Poland Chinas, Duroc Jerseys, Including Grand Champion Poland China Boar.

Colorado Agricultural College, Ft. Collins, Colo.

Buy Your Foundation Now

in Purebred Livestock from a big organization that spares no money to buy the best and specializes on purebred registered

Herefords ***Percherons***
Holsteins ***Duroc-Jerseys***

Breeding stock of all ages for sale. Individual or carload lots.

MYRON STRATTON HOME FARMS,
James J. Gauld, Supt. COLORADO SPRINGS, COLO.

General B.

CLOVERDALE RANCH
HAMPSHIRE HOGS

EARLY MATURING MARKET TOPPERS

Pay Dividends on the Investment. Only a small percentage of our fall litters were saved for breeding purposes, but they are extra good ones—well grown out. Inquiry for Hampshires is good and sales are increasing every week. Our hogs have been shipped into four different Rocky Mountain states this winter. Have only a few gilts left that are bred for spring farrow, and one or two choice young boars. Write us your wants today. Prompt delivery and satisfaction guaranteed.

N. E. MOSHER & SON, HUGO, COLO.

DUROCS. DUROCS.

The War Is Over—You can buy registered Durocs at

PRE-WAR PRICES

from the herd that won more blue and purple ribbons at the recent State Fair than any other herd. Thirty herds competing. We won 27 ribbons, including grand champion sow, 12 firsts and champions. More animals of Blue Ribbon Sensation blood were represented in the winnings than those of any other sire.

Buy one or a carload from

Blue Ribbon Live Stock Co.
C. F. Burke, Mgr. PUEBLO, COLO.

SPRING BOARS

Just a few real herd headers left ready to go at pre-war prices. Used with grade sows even, they will more than pay for themselves on the first crop of pigs. Write today.

C. C. Boyd, Yuma, Colo.
Livestock Auctioneer and Duroc Breeder.

Big Type Registered Duroc Jersey Bred Sows

From $5,000 sires of Pathfinder, Crimson Colonel, Kerns Sensation, Critic Sensation, Defender, Victor, Gold Model and Illustrator families. Our culls made 250 pounds at 4½ months this season. Sows for sale at farmers' prices if taken now.

E. W. BROWN, MITCHELL, NEBR.

DUROCS

Gilts bred to my champion boars and June pigs from my great yearling "Golden Chief" and a daughter of the World's Grand Champion, Great Orion Sensation, can be seen at the Stock Show.

J. W. Brauer,
22 Lorraine St., Colorado Springs, Colo.

HAMPSHIRE HOGS.

DeKalb's King 160th
BRED SOW SALE

At our farm, ARAPAHOE, NEB., FEBRUARY 20, 1922. Write for catalogue and other information.

C. S. BRATT & SON, Arapahoe, Neb.

PUREBRED HAMPSHIRES

My Hampshire herd is the same blood lines that made such remarkable records at the Des Moines, Ia., and Lincoln, Neb., state fairs in 1919. I am now offering sows and gilts bred for March and April farrow. Also some choice September pigs. Write me.

P. P. CEDER, GENOA, NEB.

STATE FAIR RIBBONS

Can be won by you. We are offering September pigs, full brothers and sisters of those that made the sensational winnings at Nebraska and Colorado fairs. Let us tell you about them.

KINGSLEY HERDS, Minden, Nebr.

Montgomery Ward & Co.

The Oldest Mail Order House is Today the Most Progressive

This 50th Anniversary Catalogue is Yours FREE for the Asking

THIS new and complete 50th Anniversary Catalogue will bring you the full advantage of all our Fifty Years' experience in creating low prices on goods of standard serviceable quality.

For every reader of this paper one copy of this book is ready—waiting here to be mailed to you. Simply fill in the coupon below and one copy of this complete Golden Anniversary Book will be sent you Free.

Today the price you pay for goods is a matter of where you buy.

There is no *standard for prices* since the war. You must *compare* prices now.

People in large cities compare prices by shopping from store to store. You, too, should compare prices—by having in your home this 50th Anniversary Catalogue.

Every price this book quotes is based upon the new low costs of raw materials.

It is filled with new merchandise bought at the new low prices and puts before the public the *right price*—the lowest price you need pay for anything you buy.

Everything for the Home, the Farm and the Family

Everything that goes into the home to make it more modern and complete from wall paper to curtains, lighting fixtures to rugs—everything at Money-Saving Prices.

For Men: Everything a man needs from clothing to tools—everything for the farm and farmer's use. Everything at guaranteed, lowest prices of the year.

We picture above your copy of our Golden Jubilee Catalogue.

And on this picture you may read the policy that has been Montgomery Ward's for Fifty Years.

Today this great new-old institution of Montgomery Ward & Co. marches in the lead among all the alert, progressive, low-price-making business houses of America.

It is a house of experts searching the markets with ready cash, buying at today's lowest prices for YOU.

Every page in this great new 50th Anniversary Catalogue breathes the spirit of Ward's—that of progress in service and saving for you.

And this page is published to tell you personally the story of Ward's and the dollars you, too, may save in buying at Ward's. The opportunity is now yours. You need simply fill in the coupon below.

Montgomery Ward & Co.
Portland, Ore.

Chicago Fort Worth
Kansas City St. Paul

Mail this coupon to Portland, Ore. H-51

To:
MONTGOMERY WARD & CO.
Chicago, Kansas City, St. Paul, Fort Worth, Portland, Ore.
(Mail this coupon to the house nearest you.)

Please mail my copy of Ward's 50th Anniversary Catalogue.

Name _____

Address _____

News of the Farm Bureaus.

(Continued from Page 8.)

November 20, but the carriers failed to issue the tariffs. The commission thereupon issued an order requiring the railroads to make these rates effective on December 27. The railroads replied with a petition to reopen the grain case with a suggestion that the general 10 per cent cut in the rates on agricultural commoditios be substituted for the reductions ordered in the grain case. The commission listened to the arguments on this petition on December 14 and two days later denied application for reopening. Clifford Thorne represented the American Farm Bureau Federation at the hearing.

—o—

Twenty Millions for Russian Relief.—The president has signed the bill which passed both the House and Senate, which provides that $20,000,000 be spent in this country for corn, wheat and condensed milk to be sent to Russia to be used in feeding starving children. The bill was introduced by Representative Joseph W. Fordney of Michigan, carrying an appropriation of $10,000,000. Upon the recommendation of ex-Governor James L. Goodrich of Indiana, Dr. Vernon Kellogg, secretary of the National Research Council, Secretary of Commerce Herbert Hoover, and others familiar with conditions in Russia, the amount was doubled. At Secretary Hoover's suggestion condensed milk was added and the amount of seed wheat was more than doubled. Senator William S. Kenyon of Iowa introduced the bill in the Senate. Following the passage of the Russian relief measure, a Chicago market report said: "Grain markets showed a strong undertone, and while fractionally lower early developed more activity as the session progressed and toward the close there was a wave of buying on reports that purchases of over 1,000,000 bushels of corn would be made weekly for Russian relief."

—o—

Cutting Corn Acreage.—More clover and less corn will be grown in the corn-belt next year as a result of the conference held in Chicago recently by representatives of the mid-west Farm Bureaus. A campaign was launched pointing out to farmers the necessity of replacing portions of the corn acreage with legumes such as alfalfa, clover, soy beans, etc. The statement issued by the presidents and secretaries of the Farm Bureaus attending the conference is as follows: "Since there was on hand in the United States on November 1, 1921, a total of approximately 600,000,000 bushels of corn in excess of the average disappearance of corn for the last thirteen years; and since there was a total of 370,000,000 bushels of corn on hand on November 1, 1921, in excess of the record disappearance of 3,082,000,000 bushels which occurred during the twelve-month period prior to November 1; and since the price for the portion of this crop which has thus far been placed on the market has been reduced to a point which results in economic injustice to corn growers; and since these excesses have effected an unnecessary drain upon the fertility of our corn belt soils; and since the acreage of corn is altogether, in many sections, in excess of the acreage which good farm management warrants, and since it is good business practice to produce in accordance with demands;

"Therefore, the representatives of the Farm Bureau Federations of Kansas, Missouri, Iowa, Illinois and Indiana, meeting in Chicago, Ill., December 7, 1921, wish to emphasize to the farmers of our respective states that permanent, profitable agriculture in the United States be encouraged by reasonably reducing corn acreage by increasing the acreage of legume crops, alfalfa, clover, soy beans, etc., such as will improve our soils, or which will not compete on the markets of the world with corn, so that the acreage of all our crops may be such as will assure production only in accordance with needs as indicated by world conditions.

"To this end, we pledge the efforts of our Farm Bureau Federations to co-operate with all farmers, farmers' organizations, agricultural colleges, experiment stations, extension forces, chambers of commerce, bankers' associations, civic federations, labor organizations, agricultural and general press, and all the people of the United States, so that agriculture may prosper and continue as the foundation of national prosperity."

Menace to Forestry.

Not within ten years has so great a menace to national forestry appeared as within the past few months or weeks. A determined effort is being organized in Washington to weaken if not eventually to destroy our national forests. This effort appears to have originated in the Department of the Interior. It aims to transfer the U. S. Forest Service with the National Forests from the Department of Agriculture to the Department of the Interior, from a department concerned with crop production to one chiefly occupied with engineering and with the disposal of public lands to private interests.

Forestry is crop production, the establishment and tending and protection of repeated wood crops. Forestry is at home in the Agricultural Department. Here it draws upon its sister bureaus of the Agricultural Department for assistance in exterminating predatory animals, for the control of forest insects, for the sanitation of livestock, and for protection against tree diseases.

Forestry on the Forest Reserves prior to 1905 did not prosper under the Interior Department. It has made notable progress since that date under the Department of Agriculture. No one can successfully establish the claim that during the past sixteen or seventeen years that our national forests have not been efficiently, honestly, and economically administered. Why then should the national forests be transferred to a department which is foreign and unfriendly to forestry interests?—W. J. Morrill, Colorado State Forester.

Rule for Measuring Hay.

Will you please give me a rule for measuring alfalfa hay in stack? Is there any certain way for measuring barley hay in ricks (bundle kind)?—E. E. D., San Miguel County, Colo.

We have measured up alfalfa stacks on the college farm for a number of years, in fact, since 1910, and have weighted out the stacks later so that we have had measurements and tonnages to compare. This following rule will give the number of cubic feet in a stack very accurately:

Q=Fowl. Where F equals a factor, varying from .25 to .37 according to the shape of the stack, .25 or one quarter of the over is used more in northern Colorado than any other figure, although a great many stacks commonly found on farms would fall under the rule of .31 of the over; 0 equals the over, W equals the width, and L equals the length. This formula simply means to multiply one quarter of the over, by the width and the length, which will give the cubic feet in the stack.

The following values for cubic feet will be found approximately correct:

512 cubic feet measured up October 1 is commonly the practice in northern Colorado; where hay has been in the stack 30 days, 560 cubic feet per ton; 60 days, 540 cubic feet per ton; 90 days, 512 cubic feet per ton; 120 days, 485 cubic feet per ton; from five to six months, 450 cubic feet per ton. Native hay well settled in large stacks, 430 cubic feet per ton.—Alvin Kezer, Chief Agronomist, Colorado Agricultural College.

There is also a general rule used for estimating hay of all kinds. Under this rule the usual method is to consider 400 cubic feet of hay a ton. The actual weight of 400 cubic feet of hay will vary according to the quality of the hay, time of cutting, position in the mow, etc. For making an estimate in a given case multiply together the length, breadth, and heighth of the mow or stack in feet and divide the product by 400. The quotient will be the number of tons as near as that can be approximated. There is no fixed rule for measuring bundled barley in ricks.

Defending the Prairie Dog.

Editor, Western Farm Life:

In his letter published in the November 15 issue of Western Farm Life, L. S. Carpenter of Greeley, Colo., refers to the suggested use of prairie dogs for their meat, and asks: Why not use the common horse, dog, rat or prairie dog?

It is generally conceded that carnivorous animals are not fit for human food; cats, dogs, wolves are carnivorous. The meat of grass-eating animals, on the other hand, can be and generally is eaten by all but vegetarians. Outside of purely sentimental reasons, the flesh of healthy horses is just as fit for food as that of an ox or cow (especially of a cow suffering from tuberculosis); both are grass-eating animals as are sheep, rabbits or prairie dogs.

Let me here inform Mr. Carpenter that prairie dogs are not really dogs, any more than ground hogs are hogs, or a welsh rarebit is a rabbit. Just like rabbits, prairie dogs eat grass, roots, seeds, etc. Very probably Mr. Carpenter eats pork occasionally, and yet pigs, as well as chickens and especially ducks, eat a lot of filth that no prairie dog, no matter how hungry, would ever touch.—J. L. Henry, Fabeus, Texas.

Regarding Reservoir Stock.

A reservoir project has sold me water stock some time ago which I now refuse to accept. I have not yet paid for this stock, neither have I papers for same. The Reservoir company says if I don't pay for this stock they will hold my livestock and implements for it. Can they hold me to taking and paying for this stock.—C. L. F., Adams County, Colo.

If you purchased the reservoir stock outright the company undoubtedly can hold you to your promise. Whether they can levy on your livestock and implements is a question that can only be decided when they try to exercise their right through the courts. If you think you are in the right in refusing to take this stock the only way to do is to let them carry out their threats.

Oats Do Not "Go Wild."

Will oats revert back to the stage of wild oats?—M. L., New Mexico.

Oats will not revert back to the stage of wild oats. If wild oats came up in your field the seed was either in the ground before planting, or mixed with the oats you sowed.

IN

Market Outlook for Farm and Ranch Products=Page 5

WESTERN Farm Life

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Vol. XXIV. *Denver, Colorado, February 1, 1922.* *Semi-Monthly*

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Canned Corn for Cattle.

What is corn silage? The succulent, appetizing and refreshing feed and relish which has done much to cheapen milk and beef production. Many still are not familiar with it and do not know the actual changes taking place when silage is made.

Corn is generally cut for silage when the kernel is in the dent. In making silage the corn plant is chopped through a cutter and packed in an air-tight silo with plenty of moisture present. Under ordinary conditions no water need be added as enough moisture exists in the plant, provided it is ensiled reasonably soon after being cut.

In the silo fermentation begins at once. The first evidences of change are a slight rise in temperature and the formation of carbonic acid gas. This is the poisonous gas which occasionally causes fatalities in the silo. By starting the cutter and letting the blower run for five or ten minutes before filling each day it can be blown from the silo. Under ordinary conditions the open doors above the level of the silage allows the gas, which is heavier than air, to drain off. During the formation of carbonic acid gas all oxygen in the silage is either used up or driven out by the gas. After the oxygen has gone any air coming into contact with the silage will cause it to mold and this is the reason for packing the silage well and covering it tightly.

Two principal acids are formed in making corn silage. These are lactic acid, which is the acid found in sour milk, and acetic acid, which is also found in vinegar. This acid fermentation keeps decay germs from living and working in the silage. As long as it is protected from air, silage should keep indefinitely.

A small amount of grain alcohol is formed. The source of this alcohol, as well as the source of the acids formed, is the sugar originally found in the plant. The amount of sugar present after fermentation is much less than is found in the green plant.

Protein matter is broken down during fermentation, but little or none of its nutritive value is lost. The changes take place with the greatest rapidity during the first week and are practically complete at the end of ten or twelve days. Losses which occur during fermentation are considerable, but can be greatly reduced by making the silo absolutely tight and by packing the silage well.

While filling, the surface of the silage should be shaped like a saucer, keeping it slightly higher around the edges than in the middle. The filled silo should be covered with some cheap material, such as stover or straw, to avoid loss by spoiling of a layer of good feed.

An acre of feed in the silo is equal to about two and a half acres in the form of dry fodder.

Silage does not settle after thirty days in the silo.

An accurate table of weights based on the height of settled silage is available.—E. J. Maynard, Colorado Agricultural College.

Instructions On Fur Shipping.

Don't put your furs into a sack that is full of holes; neither tie up the end of a good sack and think you have made a secure bundle, for you have really done just the reverse—you have simply invited some dishonest fellow to help himself to your furs and if he accepts the invitation there is no one to blame but yourself. Remember that a great many different people handle your shipments before they reach the market, and if you want people to keep their fingers out of your furs, you should make your bundles secure. All bundles of furs (except those sent by parcel post) should be sewed up tight. Parcel post shipments should be properly tied, but do not sew up, as that prevents inspection of contents by post office department.

A few special tree traps are valuable additions to every trapper's equipment. They are good for catching marten, coon and other tree climbing animals. They are set on the side of a tree, well above the ground, and are ideal in the north country as they do not snow under. The animal is generally caught by the neck and instantly killed, so there is little chance of its escaping.

Sauce for the Gander.

"What's this?" said John Smith, as he came upon his wife's new sewing machine knee deep in a snow drift.

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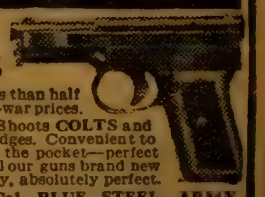

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Western Farm Life

A Western Magazine for Western Farmers and Stockmen

VOL. XXIV. DENVER, COLORADO, FEBRUARY 1, 1922. No. 3.

National Western Show Scores Sixteenth Success

LIVESTOCK INDUSTRY GIVEN NEW IMPETUS BY SPLENDID EXHIBITION

ALVIN T. STEINEL.

THE sixteenth annual National Western Stock Show, Denver's biggest event of the year, passed into history with the week ending January 21, recording another success in its long story of progress. Financially the show did not pay, but educationally it left its imprint upon the west's leading industry, insuring a tenfold return for the outlay and unselfish effort on the part of the Stock Show association. Denver's support of the show was not what it should have been, for two reasons—a sudden zero spell in the middle of the mildest winter in years and the general tendency of the public toward thrift. Reduced fares on all railroads helped in keeping the attendance of outside visitors up to normal, but there was no rush toward the west's trade center, as there is in flush times when occasion is offered for a journey and a holiday in the big city.

If there is some regret because of losses that must be made up there is, on the other hand, nothing to apologize for in the quality, size and accomplishments of the great exhibition. In numbers the breeding cattle entries were about normal; in quality there was a distinct advance over previous years, in practically every class. It was apparent that breeders of cattle and hogs had passed the crisis in the economic readjustment and that their eyes were fixed forward, toward the era of prosperity which is coming. Tested by every rule and precedent of history, the livestock industry, particularly in the intermountain region, is due for a strong revival. That this is the opinion of most breeders who have come to the National Western year after year was plainly evident in the ringside discussion of trade conditions. Sales of breeding stock did not rule high, but there was a healthy demand for foundation stock of the type that improves the blood, rather than such as is desirable only for show ring purposes.

Nothing so clearly evidenced the return of better times as the demand for feeder cattle, over 300 carlots being disposed of at auction, as against only 151 last year. Cheap feed and plenty of it; freer credits due largely to War Finance Corporation activities, and the unquestioned outlook for a better consumptive demand for beef, stimulated the buying of feeders.

Bank clearings are always a safe barometer of business for Stock Show week. These totaled $7,154,440.38 for the two banks at the yards, to which may safely be added $3,000,000 cleared through downtown banks, which brings the total up to above $10,000,000—a normal Stock Show week figure that looks like old times. It indicates that "business as usual" is the slogan for breeder, feeder and farmer.

The sale of Hereford breeding cattle made a fair average, namely $377 on 48 bulls and cows put through the ring, with a top of $3,000 paid by Paul Hahnewald of Meeker for Andrew Christensen's Beau Blanchard 77, the bull that was first in the senior bull calf class and grand champion calf of the Western Hereford Futurity. Christensen also did well in females at the sale, disposing of a fine pair of 2-year-olds for $800 each, to Hahnewald. The sale average on females was $373, and on bulls $380.

The Shorthorn sale average showed a slight increase over last year, being $156 on the 22 bulls sold, and $252 per head on the ten females, with a general average of $186. Top in this sale was $400, paid by J. T. Brown of Folsom, N. M., for Ashbourne Challenger, consigned by Ex-Governor Shallenberger of Alma, Neb.

At the annual meeting of the Western Shorthorn Breeders' Association, Benjamin C. Allen of Colorado Springs was re-elected president; C. A. Melburn of Elbert, Colo., and A. C. Hauf of Glendo, Wyo., vice presidents, and Russell Warnock was re-elected secretary. The association is planning an active educational campaign throughout the west, with an experienced field man in charge.

Holstein Men Enthusiastic.

The Holstein fraternity had greater reason for rejoicing than perhaps any other set of breeders. The dairy division, especially that part of it reserved to the Black and White cattle, showed more real advancement in numbers and quality than any other division of the National Western show. It was apparent that the milk cow is more than holding her own. In fact, it took a year and a half of depression in the livestock industry to really prove the worth of the "foster mother of the world." All the dairy breeds showed activity and growth and marked interest on the part of farmers visiting the show.

The Holstein sale was evidence of the strength of dairying in Colorado. Forty-one head of registered breeding cattle went through the auction ring, recording an average of $233 for the sale. Thirty-four females averaged $244 and the seven bulls made an average of $119. Top was $515 for Winnifred Mutual Friend from the James Gibson herd at Mount Morrison, sold to his neighbor, the Willow Springs Farm.

Another indication of Holstein progress and aggressiveness in the campaign to extend the dairying industry was the election of W. S. Partridge of Holly as president of the Colorado Holstein Club. The meeting was a lively one and some differences of opinion were at first manifest. These were ironed out in the selection of the following representative list of directors: Walter Polley, Johnstown; Norman D'Arcy, Parker; M. E. Penrose, Denver; C. F. Louderback of the Modern Woodmen Sanatorium herd, Woodman, Colo.; C. C. Wilson of Turkey Creek Farm, Colorado Springs.

The board was authorized to appoint a field secretary who shall devote his entire time to the development of the breed and the extension of dairy activities throughout the state.

In token of appreciation of their faithful and efficient labors of the past handsome loving cups were presented to Mrs. R. G. Douglas of Rush, the retiring president; Mrs. Storrs Hall, the secretary, and Mrs. M. E. Penrose, treasurer. Under Mrs. Douglas' administration splendid progress has been made, but she asked to be relieved of the office which she has so ably filled and the selection of Mr. Partridge as her successor had the unqualified approval of the membership. Mrs. Douglas' achievements as a breeder and developer of Holsteins brought her many words of appreciation and good will. The recent accomplishment of a world's record by a cow in her Sanborn Meadows herd brought congratulations to the retiring president from all sides.

A Splendid Horse Show.

While the farm reader is interested primarily in an account of what took place in the breeding and feeding divisions of the show, a word about the evening horse shows will not be amiss. The horse show is depended upon to bring the gate receipts up to somewhere near the point where the National Western can pay expenses. Maintaining the standard of the evening performances and keeping things moving in a snappy way, is the task that falls to Mr. D. Schilling of Aroya, Colo. Mr. Schilling is known in the west chiefly for his work as a breeder of Duroc Jersey hogs, but he is first and last a horseman, a lover of fine animals and an expert in the intricate matters relating to ring management of horse shows. His long acquaintance with the men and women who spend money lavishly in keeping up fine stables of show horses, and his knowledge of the game, are assets to the management which are invaluable in making the evening programs a success. This year's horse show was up to the high standard and it is to be regretted that the weather and other factors cut down the attendance.

As general manager of the National Western Stock Show, Mr. Harry L. Youngerman is given responsibility which he is carrying without visible effort. No position in the roster of officers requires more tact, more effort and more executive ability than that of heading the organization which puts over the show. Mr. Youngerman isn't a figure-head, or a desk manager, but his constant presence in the arena is evidence that he is on the job every minute, ready to smooth out the rough spots, soothe the ruffled temper of judge or exhibitor, spectator or concessionaire. Youngerman has a man's job and he measures up to it in every way.

The Men Behind the Show.

Behind him are these men, all working with a will, and at a sacrifice of time and money to keep the National Western Stock Show in its commanding position of influence in the upbuilding of the livestock industry:

Hon. E. M. Ammons, president.
Henry Gebhard, first vice president.
W. N. W. Blayney, second vice president.
H. L. Youngerman, general manager.
Fred P. Johnson, secretary.
Robt. R. Boyce, treasurer and assistant secretary.
R. M. Lewis, superintendent of carlots.
J. A. Bixby, superintendent of concessions.
Earl Johnstone, superintendent of admissions.

Directors—E. M. Ammons, Benj. C. Allen, G. W. Ballentine, W. N. W. Blayney, A. J. Campion, R. A. Chace, A. E. deRicqles, T. F. DeWitt, Henry Gebhard, Carl W. Henry, Fred P. Johnson, Geo. E. Morton, John E. Painter, Spencer Penrose, J. A. Shoemaker, Chas. G. Smith, R. M. Shearer, John F. Vallery, Geo. T. Wells, Chas. MacA. Willcox, W. L. Warnock, L. A. Gilbert.

Remember, you who read this, that the Stock Show Association is incorprorated under the laws of Colorado NOT for profit; that its officers are performing an unselfish service that should have the unstinted support of every farmer, breeder and feeder in this great western country. The time is coming when the financial problem of maintaining the show will be up to all of us who are benefited by it. The packing industry is forbidden by federal rules and regulations from active financial support of livestock exhibitions. They are producers' and breeders' shows. Let us do our part in maintaining them, and especially the one that serves the intermountain country.

Blayney Domino, Grand Champion Hereford, National Western Stock Show, 1922.

Beef Cattle Show.

GEORGE E. MORTON.

The beef cattle exhibit as a whole was an improvement over any previous year. The Shorthorns in past years have shown many high-class animals at the top of the classes, but nearly always there has been a tail-end to the ring. This year this unevenness was almost wholly eliminated, the extreme uniformity being apparent in every class.

Maxwalton Monarch, the Carpenter & Ross bull that stood first in the aged class at the International, was first at this show, with Princely Stamp, the

(Turn to Page 12)

Relation of Cash Rental to Valuation of Farms

LANDLORD'S RETURNS LESS THAN INTEREST ON FARM MORTGAGES

THE relation of cash rental to farm land valuations on a third of the cash tenant farms of the United States is found to be 3.54 per cent in a study of the new census returns by the United States Department of Agriculture. In an investigation designed to discover a basis for making accurate land appraisals, C. O. Chambers of the Division of Land Economics, examined the 1920 census schedules of 158,000 farms. The total value of these farms was $2,679,317,100 and the gross rent $94,960,458.

A preliminary statement emphasizes the significance of the ratio of cash rent to land value as an indication of the rate at which land is capitalized. This is a vital consideration to buyers and sellers of farms and farm mortgage securities, also to the public in considering policies affecting farm tenancy, credits, speculation, tariff, reclamation and other vital problems.

Though the 158,000 farms whose census schedules were examined for this study were less than 3 per cent of all farms in the United States, they comprised 33 per cent of the farms rented for cash. These farms averaged in value $16,950 and were rented for $600.74. Their valuation per acre for land and buildings was $153.67, and their rent per acre was $5.45, or 3.54 per cent. The gross cash rent for a year was but a twenty-eighth part of the valuation. In other words, considering gross rents merely, the land was held on what the English would call "28 years' purchase."

This leaves out of account the advance in price of the land by which land owners have been compensated for low rents. In the 70 years from 1850 to 1920 the money value of an average acre of farm land for the United States advanced at an average annual rate of 2 per cent compounded. For many owners of rented farms this advance in land prices was sufficient to compensate for holding land with small gross rents.

No Apparent Relation.

The showing of 3.54 per cent is so low as to lead to wrong conclusions. It might be assumed, for instance, that the low ratio is evidence of poor farm lands, but the facts show that the best land in the country is characterized by lower ratios than land in sections with much inferior land. The quality of the land is no explanation of the ratios of rents to valuation. In many sections the principal reason for the low rate appears to have been the expectation of gain from advance in land prices.

Even if increases in land prices are added to net rents it appears that American farm properties have been capitalized at a modest rate compared to government bonds, farm mortgage loans and gilt-edged securities in general. This may be due partly to lack of appreciation on the part of farmers as to investment opportunities in other fields, and partly to an easy over-emphasis of one's chances to make specially large gains from advances in land prices.

Low Enough to Invite Tenancy.

Tenant farming is not likely to be given up by operators who can hire all or a considerable part of the land and buildings they need for 3.54 per cent. Tenants who would have to borrow money would naturally hesitate to buy land they could hire at less than the mortgage rate. This may account for the large proportion of land operated by lessees in the low ratio sections of the country.

Appreciation of land prices may have added such large increments to the value of tenant farms in certain sections as to make it easy for landlords to refrain from raising cash rents to a corresponding extent. A slackening of advance in land prices, such as occurred around 1890, when prices of farm products were low, would doubtless cause land owners to give greater consideration to rental income in their calculations. If unable to anticipate a gain in value in addition to their rental income, the speculative motive for acquiring and renting farm lands would subside, and land values would probably be revised downward to an extent that would permit a larger rate of returns from rentals.

Wherever rental ratios are small, as compared with returns on other reasonably safe investments, it may be possible that expenditures for draining, irrigating, or clearing land will not yield an adequate return. It is clear that the rate of capitalization of raw land must be seriously considered before bringing new land into use. It is true, the data indicate comparatively high rates of returns in sections where large areas of new lands are available. However, the figures do not discriminate between the rate of return on reclaimed and reclaimable land from the rate on other lands in the same county.

Striking Sectional Variations.

The significance of sectional variations is made more evident by regional summaries. Cash tenant farms in selected North Central counties showed an average rental ratio of 2.89 per cent; in Pacific counties, 4.26 per cent; in New England and Middle Atlantic counties, 4.49 per cent; in Mountain counties, 6.34 per cent; and in Southern counties, 7.26 per cent. The states whose selected counties showed the highest averages were Arkansas, 10.66 per cent; Mississippi, 10.04 per cent; and Arizona, 8.37. On the other end of this scale were North Dakota, 2.17; South Dakota, 2.52; and Nebraska, 2.59. Some individual counties showed percentages 10 or 12 times as high as others.

Among possible factors causing sectional variations the following may operate: (1) lack of uniformity with which capital has been available for land purchases; (2) conditions which make it necessary for owners to supervise tenants and furnish them supplies; (3) differences in real or fancied desirability of regions from the standpoint of markets, residence and other considerations.

The length of time for which contracts had run made a marked difference in the rate returned on the farm valuation. The contracts which were over 1 year old showed returns of 3.67 per cent, as compared with 4.35 per cent on new ones, the new contracts calling for cash rents about one-sixth higher than old ones. This was true of all tenants, regardless of color or kinship. Part of the explanation may be in the fact that contracts of one-year duration were especially characteristic of high-ratio sections. Furthermore, the census was taken at a time when cash rents specified in old contracts doubtless ran lower for farms of the same valuation than for farms whose rental contract was not so long-standing.

Care should be used in drawing conclusions from these data, since the cash rents are for only a single year, 1919, a time when both land values and rentals were high. The great decline in farm prices since 1919 may have caused a more rapid decline of rents than farm prices. High-ratio sections should not be compared with low-ratio sections on the supposition that differences in ratios express similar differences in the desirability of farm investments in the respective districts, nor should it be assumed that the differences in rates of return measure differences in the productivity of the land. It is proper to take into account the prospective increase in value of the land, as well as the amount of supervision that must be supplied by the landlord, the amount of risk incurred, and other considerations.

The wide diversity of rates of return emphasizes the need for scientific appraisal of farm lands and buildings for both taxing and loan purposes. The mere acceptance of prevailing land prices is an unsound practice in appraising.

Scientific appraising must give proper attention not only to customary "selling value," but to the rate of return from renting the property and to other indications of its use value. Without more scientific appraisal it is vain to hope for the most equitable distribution of tax burdens, or of funds for loans on first and second farm mortgages.

Colorado Alfalfa Needs No Commercial Fertilizer

INTERESTING COMPARISONS FROM STUDY OF A KANSAS BULLETIN

APPLICATIONS of fertilizers carrying phosphorus to alfalfa show no appreciable results in the region of the State Experimental farm in northern Colorado. This was brought out by Prof. Alvin Kezer, Chief Agronomist of Colorado Agricultural College, in commenting on a bulletin by the Kansas Experiment Station, entitled "Fertilizers for Alfalfa in Eastern Kansas." Interesting comparisons may be made between conditions under which alfalfa is grown in eastern Kansas and in Colorado by a study of the bulletin and the comment of Prof. Kezer. Conclusions summarized in the bulletin are as follows:

The crowding out of alfalfa by grass and weeds is the result of unfavorable conditions for the alfalfa. A strong healthy stand of alfalfa can successfully combat weeds and grass.

Alfalfa will not succeed on acid soil. This condition of the soil may be corrected by the use of lime.

Lime increases the value of manure and commercial fertilizer for alfalfa but will not replace them.

Kansas soils are lower in phosphorus than in any other plant food.

Phosphorus in the form of acid phosphate may be used with profit in the production of alfalfa on practically all soils of the eastern fourth of the state.

Money invested in acid phosphate returned a profit varying from 200 to over 500 per cent when the acid phosphate was used on alfalfa.

On established stands of alfalfa, acid phosphate should be applied in the early spring at the rate of about 300 pounds per acre every second year. For new stands the application should be made just before seeding.

In establishing new stands of alfalfa a fertilizer containing some nitrogen should be used except when the field has had a recent application of barnyard manure. A 2-12-6 mixture applied just before seeding at the rate of 200 pounds per acre is usually satisfactory.

Rock phosphate has not been as profitable as acid phosphate and has not greatly increased the yield of alfalfa.

Potash has had little influence on the yield of alfalfa and in no case has it been profitable to apply it.

Barnyard manure gives very profitable returns when applied to alfalfa, but when manure is limited in amount it is usually better farm practice to use the manure on cultivated crops and fertilize alfalfa with acid phosphate.

What Kezer Says.

Discussing these results, Prof. Kezer says:

"I notice in the summary a very good resume of their conclusions. Paragraph 7 calls attention to the fact that acid phosphate could be used with profit on about the eastern fourth of Kansas. There are some analyses showing the amount of phosphorus in some of the prevailing soil types of eastern Kansas, such as the Marshall silt loam, Oswego silt loam, Colby silty clay loam, Lincoln silt loam, and Bates silt loam. We notice that the Bates silt loam only carries 700 pounds of phosphorus in the surface 7 inches of Kansas soil, which is equivalent to about 1,400 pounds, roughly, per acre foot. The last soil in the table shows a content of 2,080 pounds of phosphorus in the upper 7 inches or approximately 4,000 pounds per acre foot, and this is set down as a very fertile soil.

"If we compare these soil analyses with some of our own along the foothills and at the base of the Rocky Mountains and in our plains valleys, we will get an idea of what we can expect from phosphorus fertilization. Soils on our own experimental farm run from 5,000 to 8,000 pounds of phosphorus per acre foot, while sandy soils in the same region run a trifle lower. All are relatively high.

"Up to the present time applications of fertilizers carrying phosphorus have given us no appreciable results, whether we applied the phosphorus carried by acid phosphates, by ground steamed bone meal, or carried by raw ground-rock phosphate. A comparison will show that our soils are very much richer in phosphate, potassium and calcium. Leaving out the question of nitrogen, which we can get supplied by agricultural means, our Fort Collins soils will run close to 8,000 pounds of phosphorus per acre foot. They will run 80,000 pounds of potassium per acre foot, soluble in water, and up to and slightly above 120,000 pounds soluble in water and dilute acid. Our soils on the College farm carry about 240,000 pounds of calcium carbonate per acre foot. All Colorado soils are not as rich as this. But most of our soils are relatively rich in these elements of fertility. I would suspect that, in the region of eastern Kansas where acid phosphate has done quite well, sulphur, applied finely ground, would also give rather pronounced results, and that raw rock phosphate, applied as finely ground material, would give results similar to acid phosphate if sulphur were put on at the same time. Probably they would not get results the first year from sulphur and rock phosphate, but they would very likely get results thereafter. I am reasoning on this last statement from analogy, because of experimental work which has been done elsewhere. I am quite sure it would work out that way, although there is no experimental evidence in Kansas as represented by this bulletin to show it. Usually where acid phosphate gives beneficial results, applications of sulphur will also give beneficial results.

"Considering the comparative analyses of Kansas soils and our own, we would expect to get very little result from commercial fertilizers and, in the experiments that have been carried on up to date, we have obtained practically no benefits from applications of the mineral fertilizers. We always get beneficial results from organic manures. Sometimes we get benefit from nitrogen manures. But sometimes there is an abundance present in the soil and occasionally too much. We have had on fallow plots on our own experimental agronomy farm nitrogen produced through the action of soil organisms in amounts equivalent to applications of from 500 to 700 pounds of sodium nitrate per acre and we have had this accumulation in a single season. Naturally, we wouldn't expect to buy very much nitrogen fertilizer where such conditions are prevalent. Besides, alfalfa, where there is an abundance of other fertilizer elements and under conditions of good soil tilth, is capable of gathering more nitrogen than it can itself use.

"I want to again call your attention to the fact that our common soils are many of them richer than the very fertile soils indicated on page 9, table 2, in the bulletin, being the last soil for which an analysis is given in that table. The Marshall silt loam of northeastern Kansas could be called a fairly good soil. The Oswego silt loam of Riley county is practically identical, as is also the Jewell county soil, although the Jewell county soil is fundamentally somewhat better. The Colby silt loam from Jewell county is decidedly poorer in phosphorus and the Bates silt of Cherokee county is decidedly poor in phosphorus.

"A perusal of the bulletin will show that the ones that are poor are the ones that respond to phosphorus, the very rich soils probably not paying to fertilize with phosphorus at all. It will be noticed that potash has very little influence on the production of alfalfa. The analyses of the amount of potassium present in the soil show quite good amounts. While the amounts of calcium given are only moderately good, much of this calcium, is calcium silicate and the calcium which is present in the soil, for the alfalfa at least, is that which is united with carbonic acid in the form we call calcium carbonate, our most common limestones. The bulletin does not show the sulphur content of the soil, and apparently no experiments have been performed with sulphur. But I feel sure that the soils that respond to treatments with acid phosphates will also respond to treatments of sulphur."

Market Outlook for Farm and Ranch Products

OF ALL BUSINESS FACTORS MONEY CONDITIONS HAVE IMPROVED MOST

EDITED BY GLENN G. HAYES.

THE farmers' and ranchman's business horizon lies far beyond the fences which enclose his farm or ranch. His interests extend to the ends of the earth. The day in which each farm or ranch was sufficient unto itself is gone forever.

The price of wheat in the farmer's bin may depend upon the rise or fall of the British pound sterling or the Italian lire.

The packers may be able to bid up a half a cent a pound for his fat cattle if Germany is able to obtain credit for purchasing provisions in America.

A corn acreage reduction campaign, War Finance Corporation credits to enable farmers to hold corn and Federal appropriations of funds to purchase grain for export to starving Russia all have a bearing on the course of the corn market.

The outlook for pulp-fed steers and for Colorado lambs is influenced by the movement of feeder steers and lambs into the corn belt and by the possibility of competition from frozen beef and lamb imported from the Southern hemisphere.

A drop in the price of cotton may take the cotton planter out of the mule market, while a heavy snowfall in New York City may temporarily enlarge the market for rugged work horses.

These instances are mentioned at random to show how intimately each individual farmer's and stockman's interest—his pocketbook, in fact—is tied up with the trend of business all over the world.

We realize that a great service would be rendered to every one of our readers if we could gauge the currents of supply and demand and if we could select and interpret each week certain events and conditions in Chicago, in Washington, in New York, in Denver, in Kansas City, in Cripple Creek, in Buenos Ayres, in Australia, in Paris, London, Shanghai and where not, as they affect or seem to affect the economic well-being of farmers and stockmen who must sell what they produce in the markets of the world. This is the character of the work we hope to do on this page. We fully realize the immensity of the task we have set ourselves.

Outlook for Farm and Ranch Business.

January is always the month of most numerous bankruptcies, because of the year-end settlements. Events of this sort which have come to the surface in the last three weeks are characteristic of the season, especially in hard times. Probably the end is not yet, as the wreckage from the financial storm must be cleared away sooner or later. Business failures in 1921 numbered 19,652, the largest since 1915, and, with this exception, the largest in twenty-four years. The total in 1920 was 8,801.

Of all the business factors, money conditions have improved most in the last year. The rediscount rate has dropped from 7¼ to 8 per cent a year ago to a 4½ to 5½ per cent basis; the Federal Reserve ratio has advanced during the year from 45.4 to over 71; gold holdings of the system have increased over $800,000,000, and note circulation has decreased about $825,000,000, or around 30 per cent. Call money in the east is as low as 3 per cent and time money has been placed at 4¾ per cent in New York, and 5½ per cent in Chicago. In spite of the improvement, however, money is still tight in many country districts because of overdue loans and crop prices too low to provide the wherewithal with which to pay them. Some of these obligations will be lifted during the winter by the snout of the hog or by the productive endeavors of the dairy cow or the little brown hen, but others must wait until another crop is harvested and sold.

Gains in other directions should not be overlooked. Foreign exchange rates are higher with the exception of the German mark. The English pound is around $4.20, compared with $3.50 a year ago. Freight rates are lower. Although farm prices have declined, most of the things farmers buy have dropped since January, 1921, in about the same proportion. Deflation is no more unbalanced than it was a year ago, although it was bad enough at that time. In 1922 we can look confidently for great progress toward equalization of commodity costs.

Good yields in 1922 upon the acreage planted, and prices for crops and live-

What Is the Future Prospect For Grain and Livestock Prices?

What is the outlook for prices this fall for wheat, corn, oats and other farm crops and livestock? Is the outlook pink or blue? Where do values stand in the cycle of changes from prosperity through adversity, around to prosperity again, which follow each other in a sequence almost as regular as day follows night.

Certain it is that the farm and ranch industry has been going through adversity for the last eighteen months, and a change for the better is next in order in the usual course of events, but the question is, must things become worse before this improvement starts, or has the turning point arrived?

We believe you readers are intensely interested in the trend of the times, and are keenly on the outlook for any signs that will, with a degree of accuracy, indicate to you the future trend of prices. It is this thought that has prompted us to establish this feature or department in Western Farm Life that will point out as clearly as is humanly possible, the future prices that can be expected for farm crops and livestock.

There is no one better qualified to edit this department than Glenn G. Hayes. His broad experience with markets, rural conditions, ability to dig out facts and write about them clearly, particularly fits him for rendering you this excellent special service. He and his associates spend their entire time in personal contact with the leading markets of the country.

The object of this department will not be to give you just the current market price of products, but rather to give you facts and figures that will enable you to look into the future more accurately. Whatever one may think of the system which determines the erratic course of prices for farm and ranch products on the market from day to day, we must recognize that the great tidal swings from good to bad fortune in the farming industry as a whole, are accompanied, and to some extent caused, by changes in underlying conditions which can be weighed and measured and which are beyond artificial control.

The signs are not as plain as the hands on a clock, of course, for one cannot tell to the day or the month when the change will come, but the turning point will arrive sooner or later, and Mr. Hayes will, to the best of his ability, keep you readers of Western Farm Life thoroughly posted. We would be pleased to hear from you from time to time as to just how you like the way this department is being conducted.

stock that will pay costs of production and perhaps a little more on the average, would do more than any other one thing to restore both industry and agriculture. The weather will have most to do with the yield per acre. The outlook for price improvement is not especially rosy, but the probability of a lower level for farm products, barring minor fluctuations, also looks improbable. The conclusion is that betterment will come about in most farm commodities through producing in such a way that the operation will be profitable even though prices do not advance materially.

Cattle Market Easily Overloaded.

Most of the time in the last month the capacity of the cattle market has been overtaxed. Barring occasional periods, the runs have not been excessive for this season, measured by records of past years, but beef consumption is lagging about 20 per cent below normal. Furthermore, the buoyant cattle market during January and early February rarely occurs because of an excessive supply of warmed up and short-fed steers thrown on the market by corn belt feeders. In this respect, present conditions are characteristic of the season.

By the middle of February or a little later bare spots in market supply may begin to appear which will result in some appreciation in prices. Beef consumption is much more likely to increase rather than decrease from this level, especially with the approach of spring.

The premium upon steers of prime and choice grade has declined perceptibly in the last few weeks, but producers are receiving much better returns upon cattle of this character than upon the partly finished steers now flooding the market, many of which are bringing but little more than first cost as feeders. Butcher cows and heifers as well as canners and cutters usually become more scarce as winter advances, but prices seldom change much from the midwinter level until along in the spring.

Stock Cattle Scramble Heralded.

Already a few transactions in stock cattle to go on grass have been closed, heralding the usual spring scramble. Some of these were in the southwest and may have involved drouth-stricken cattle. Kansas is placing orders in Texas where, it is said, not over 70 per cent as many mature steers are available as were moved northward last spring.

Two years of liquidation, it is believed, have gone far toward completing the process so that further drastic curtailment of herds is not anticipated except as forced by drouth in certain sections. On the other hand, restocking is expected to proceed in the northwest, especially if nature is kind and this demand may help to advance the stocker market. Prices usually advance during the spring months with the rise of grass, so that temporary breaks from prevailing levels will provide as good buying opportunities as can be expected. On the other hand, the outlook for grass cattle prices by next fall hardly justifies a pronounced advance in the stocker and feeder market.

Midwinter Boom in Hog Market.

The hog market has been on the boom, an unusual occurrence at this season. Prices are at the highest level since last September, before the winter run had started. Thus far since November 1, the start of the winter season, hog slaughter has fallen nearly 9 per cent below the corresponding season a year ago, and demand for fresh meat has been of such breadth that packers have retained but small storage stocks, although the season of heavy accummulation is two-thirds gone. Eastern buyers have been making extensive purchases in the middle west, while there is an evident scarcity on the Pacific Coast and in the southwest.

Generous runs can be expected right along for another six weeks. Producers evidently are holding back to put on weight with cheap feed since the official estimate last fall failed to show a reduction of any consequence in the number of hogs in the country. But domestic consumption and export demand promise to handle the supply without difficulty.

Lamb Feeders Recoup Losses.

A year ago last fall feeder lambs were purchased at prices so high that huge losses were almost a foregone conclusion because of conditions surrounding the fat lamb market. This year the table has been reversed and as a result of moderate prices paid for feeders last fall lamb feeders will recover part of their losses of a year ago. Lambs bought a few months ago at $5.25 have realized $13.00 when returned in finished condition recently.

The number of lambs on feed in all sections is much lighter than a year ago. The decrease in Colorado is placed at 25 to 35 per cent. A few Colorado lambs have already straggled into Kansas City and Chicago, but the real movement from that section is not expected for three or four weeks. Prices are expected to maintain current levels, but further advances are rather doubtful. Some Texas lambs are being moved into the middle west as a result of drouth. These usually come upon the market during the spring months instead of mid-winter. A little New Zealand frozen lamb is being offered in the east, although its previous record there was not satisfactory to importers. Prices upon dressed lamb are out of line with other meats, and this also is a restraining influence.

Wheat Awaits Flour Demand.

Demand for flour failed to show the urgency expected after the first of the year, although there has been an increase in the quantity of wheat absorbed by mills. Mills are said to hold very light stocks for this season of the year. Wheat prices have been holding within a narrow range so that flour buyers see no cause for anxiety and are purchasing but little ahead of their immediate requirements. In the last day or two wheat prices have advanced slightly. If values should take a definite upward trend it is quite possible that flour buyers would begin to anticipate their wants for several months ahead.

The Pacific Coast states are said to have about 37,000,000 bushels of wheat for export and for carry-over. In addition there are about 15,000,000 bushels of Durum in the northwest which must be exported. Subtracting these amounts it is believed that milling grades of wheat have been heavily over-exported from the section east of the Rocky Mountains. Imports from Canada to fill any such deficit are more probable than shipment of the Pacific Coast wheat overland.

Argentine Surplus to Europe.

Argentine wheat is taking the center of the stage in the export trade. The new crop is being offered to Europe at prices 8 or 10 cents below North Amer-

(Turn to Page 16.)

Range of Livestock Prices for the Week Ending January 19, 1922.

	Denver.	Kansas City.	Omaha.
Cattle—			
Choice and prime heavy steers (1100 lb. up)		$8.15@9.25	$7.75@9.00
Good heavy steers		6.85@8.25	6.75@7.75
Medium heavy steers		6.15@7.00	5.75@6.75
Common heavy steers		5.35@6.25	5.00@6.00
Choice and prime light steers (1100 lb. down)		8.50@9.50	8.00@9.25
Good light steers	$6.50@7.50	6.90@8.50	6.75@8.00
Medium light steers	5.50@6.50	6.35@7.10	5.75@6.75
Common light steers	4.50@5.50	5.10@6.25	5.00@6.00
Common to choice butcher heifers	3.25@6.50	3.75@7.25	3.75@7.25
Common to choice butcher cows	3.00@5.25	3.50@5.35	3.25@5.25
Bologna and beef bulls	2.75@4.50	3.00@5.10	2.75@5.00
Canners and cutters, cows and heifers	1.75@3.25	2.10@3.50	1.50@3.00
Canner steers	2.50@3.50	2.75@3.50	2.50@3.25
Medium to choice light veals	7.00@10.50	6.25@9.00	5.75@9.00
Common to choice heavy veals	4.00@7.00	4.00@7.50	3.50@7.25
Common to choice feeders (1000 lb. up)		5.00@7.00	4.75@6.85
Common to choice feeders (750@1000 lb.)	5.00@7.00	5.00@7.00	4.75@7.00
Common to choice stocker steers		4.00@6.95	4.25@7.00
Common to choice stocker cows and heifers		3.00@5.40	3.25@5.25
Hogs—			
Top of market	$7.65	$8.25	$8.00
Bulk of sales	$6.75@7.50	$6.90@8.00	$6.90@7.90
Heavy (250 lb. up)		6.40@7.80	6.90@7.90
Medium (200 to 250 lb.)	6.75@7.50	7.25@8.00	7.00@8.00
Light (150 to 200 lb.)	7.00@7.65	7.10@8.25	7.15@8.00
Light lights (130 to 150 lb.)		7.00@8.25	7.15@8.00
Smooth Packing Sows (250 lb. up)		5.50@6.75	5.50@7.00
Rough Packing Sows (200 lb. up)	5.50@6.00	6.00@6.00	5.25@6.50
Stock Pigs	6.00@7.00	7.00@8.25	6.75@8.00

How I Grow Head Lettuce at Eight Thousand Feet

HIGH ALTITUDE FARMER ON PROFITABLE VEGETABLE PRODUCTION

DR. C. J. MEYER, Waldhouse Ranch, Granby, Colo.

FARMERS, ranchmen, commission houses and the public in general were surprised last fall to hear about fabulous prices—as high as $1,000 a car—which a few carloads of head lettuce, grown in the high mountains of western Colorado, brought to some industrious and enterprising growers. One car was sold—I do not know for how much—but it was a goodly amount from Tabernash, a place on the much-talked-of Moffat road, about 8,500 feet above sea level, and twelve miles east of the Waldhouse ranch. Another—the $1,000 car—was shipped from Yampa, about 100 miles west and 1,000 feet lower than my place.

At once, as there was no longer any use to talk of hay, grain, cattle, sheep or hogs, everybody talked head lettuce. Dreams of getting rich quickly disturbed the otherwise restful nights of many a rancher and farmer, who even with the 8 per cent help of all the much-heralded government loans were hardly able to make both ends meet. Rosy prospects of coming to his own again, without mortgaging his very soul and underclothes to the government or the local bank, arose before the eyes of many hard pressed men and women, and they thought, first only shyly and silently, that surely the golden millenium had arrived. By and by they thought louder; then they began to shout, then to yell—HEAD LETTUCE! until the country from one end to the other became one big field of golden-leaved head lettuce, selling at least with profit of $500 to $750 per acre—in their imagination!

To form a correct idea about this crop which, handled in an intelligent, business like way would undoubtedly bring good cash returns to all concerned, it is necessary to turn the searchlight on the subject from different angles.

My personal experience for the last twelve years in raising many kinds of vegetables for table use and stock, has proven to me without doubt that it can be done, provided such a crop is well taken care of.

My ranch is on the Moffat road in Grand county, altitude 8,000 feet; average moisture 18 inches; no irrigation. There is no question and no doubt the vegetables we can raise in this high, cool, dry climate far excell in quality and flavor the ones raised in a lower altitude and with irrigation.

While with regard to yield our crops of roots, onions, cabbage, cauliflower, etc., are smaller, they are of a superior flavor and free from lice, bugs and other insect pests. While we cannot raise cabbage and cauliflower as large as a good-sized wash tub, we challenge the world to produce vegetables of a finer, sweeter flavor. But, and there is a big BUT, the matter must be understood thoroughly. If you do not understand the difficult problems which arise if we try to raise vegetables under our peculiar climatic conditions, better not to try at all. It is an entirely different thing to raise cauliflower, or spinach, or asparagus, or onions, or head lettuce.

And this brings us back to lettuce again, and especially head lettuce. Suppose now a man understands how to raise vegetables in a general way, there are still many points that nave to be considered under our climatic conditions, to make a financial success of the crop.

1. Selection of the soil. 2. Preparing of the seed bed. 3. Seed. 4. Planting. 5. Cultivating. 6. Harvesting, and 7th, last but not least, marketing.

I shall deal with the first five items in a more or less summarizing way, on the supposition that anyone who wants to take a few hundred dollars of clear profit from an acre, should at least know the main principles of the business. I shall use more space on the "dont's" than the "do's."

Selecting the Soil.—In some newspapers you could read: "Head lettuce will grow fine on fresh upturned soil." Such statements are misleading and not in line with the facts. Beware of such statements, as it is very likely that they come from a land promotor, or speculator, who wants to get rid of his otherwise worthless holdings through deceit. Don't be a sucker!

A light black loam, with a good subsoil of clay is the best soil for head lettuce; in fact, for nearly all vegetables. If you did raise on such soil, previously some grains, or field peas or rape, so much the better. I would never select for raising any kind of vegetables for commercial use any river bottom land, where for many a year nothing has been raised but hay. Such meadows consist of a thin layer of humus with underlying sand and gravel. Such land will never hold moisture at all. To raise a hay crop on such land it must not be irrigated, but soaked with water from the start till a few days before cutting, but this will not do for raising head lettuce, as the less water, the better.

Preparing the Seed Bed.

2. The seed bed has to be prepared just as good as your garden tract. In fact, the seed bed should be a finely pulverized mulch to the depth of 6 to 8 inches. To get such a condition the land should be plowed to a depth of at least 14 inches in the fall. Such soil will gather all the snow during the winter and nearly all the water from the melting snow in spring. For plowing I prefer a 14-inch double disk plow. A light application of well rotted barn manure (sheep droppings preferred), before plowing will help to develop strong, vigorous plants next summer. So you see you should have started to prepare your seed bed last fall. Disk, harrow and disk and harrow again and again as soon as the weather permits in early spring, till the soil is in perfect condition and then pack and level.

3. Seed. Get the very best seed you possibly can, without any regard to the cost. So much depends, with our short season and the peculiar climatic conditions in our altitude, on the quality of the seed, that the crop will be a failure if you use inferior seed. A good way to get good seed is through co-operative buying. Growers should act together and ask several responsible seed houses to forward samples, then have a thorough test made by the State Seed Laboratory at Fort Collins. Any good California head lettuce variety or the May King is well adapted for our purposes. I prefer the May King.

4. Planting. There are three questions pertaining to planting of lettuce and, by the way of a few other vegetables, not yet settled in the heads of the wise ones. Shall lettuce be sown in fall in the field, or early in the spring in a cold frame (not hot bed) and later transplanted to the field? Or shall it be drilled directly in the field in the early spring and then thinned out after the plants have reached a certain growth, say about 4 or 5 leaves?

In my opinion, while you may get some results from late fall drilling, it will not do for a big acreage. The stand will be too irregular and uneven, and you may have to do the job over again under adverse conditions. For a small acreage, one or two acres, sowing in spring in a cold frame and transplanting later to the field, will prove the best way and yield an even, beautiful crop. Of course, this will not do for larger acreages, 10, 20, 50 acres, and unfortunately most beginners talk only in 10, 20, 50 acre lots. The less a fellow understands about this business, the more noise he makes about it.

Give Plants Ample Space.

Before transplanting from the cold frame go over your land with a home-made marker, to be sure you get your plants exactly where you want them. Two feet in the rows and the rows 2 feet apart will be the best under dry farming. Remember a plant which has to grow under dry conditions needs more soil space to draw moisture from than the same plant raised under irrigation; and 2 feet by 2 feet is not too much space for head lettuce which matures heads from 12 to 14 inches in diameter.

5. Cultivating. This may be crystalized in a few sentences. Absolutely no weeds! Keep the soil well broken and mellow, just as you would do in a well appointed garden. You must cultivate both ways, and where you have your plants in straight lines, the job is an easy one. I will add a few words right here about irrigation. If you have irrigation water, it may be beneficial to the freshly set out plants to keep the neighborhood of young lettuce moist till the young plants have started a vigorous healthy growth. Then stop irrigation and cultivate three or four times during the season.

While the heads matured under dry conditions are very likely to be a little smaller than the ones raised with irrigation, they are hardier, more solid and of a superior quality in general, and absolutely free from bugs, worms, etc.

Notwithstanding the latter fact, it is always good policy to spray once or twice during the season.

Young head lettuce is not only relished by humans, but also by rabbits, porcupines, squirrels, chipmunks, gophers, moles, etc. Therefore, you should keep an eye on your lettuce patch. Destroy the rodents and place a 3-inch chicken wire fence around the lettuce area. The subjects of harvesting and marketing will be taken up in another article.

Department of Agriculture Extension Activities

WORK DONE AMONG FARMERS IN U. S. AND INSULAR POSSESSIONS.

ACCORDING to the report of the States Relations Service of the United States Department of Agriculture for the fiscal year 1921, substantial progress is being made in promoting scientific research at the various experiment stations, and in carrying the helpful results of research to the farms and farm homes of the United States through the co-operative extension work in agriculture and home economics.

As the report shows, the States Relations Service has supervisory and advisory relations with the state agricultural experiment stations and agricultural extension work, conducts agricultural experiment stations in Alaska and insular possessions; makes investigations regarding food, dietetics, clothing, and household equipment and management, and prepares special publications and illustrative material for use in schools giving instruction in agriculture.

It employed during the period covered by the report a force of approximately 4,000 persons and had advisory and supervisory relations in the expenditure of approximately $13,225,000, of which about $8,625,000 was Federal funds.

The funds available for use in the fifty state experiment stations in operation during 1920-21 aggregated $7,674,671, of which $1,440,000 was from Federal sources. Special efforts have been made to assist the stations in conserving their funds and devoting them more strictly to definite experimental work.

The co-operative extension work in agriculture and home economics was conducted during the past year through two extension offices, one for fifteen Southern states and the other for thirty-three Northern and Western states. Since October 1, 1921, the Office of Extension Work in the north and west and the Office of Extension Work in the south have been combined, so that for the coming year the county-agent activities, home demonstration work, and club work with farm boys and girls, will all be part of a unified program.

Work in Southern States.

Depressed economic conditions in the southern states led the 861 white county agents and the 154 negro agents employed in agricultural work to give an unusual amount of time to marketing problems, assistance in the organization of 2,031 co-operative associations for buying and selling being an outstanding feature of this work. These agents reported 230,819 field demonstrations with crops by adult farmers and boys on 2,274,534 acres. The average yield on the demonstration fields was from 50 to 100 per cent greater than the average yields of general crops in the same territory. Livestock production was encouraged, with the result that, through the influence and advice of the agents, farmers purchased 69,877 head of purebred stock and 41,393 head of grade stock, conducted over 25,000 feeding demonstrations, started over 9,000 new herds, and treated over 3,000,000 head of livestock for disease and pest prevention. Drainage, terracing, improvements of buildings and grounds, planting of vegetable gardens and home orchards also received attention. About 114,000 boys conducted demonstrations in the growing of crops and purebred animals.

The home demonstration work with 240,000 club girls and women in the southern states centered around the improving of diet and other home conditions, raising and marketing of products to increase the family income, and making the home more healthful and attractive. Over 14,000,000 pounds of meat products were cured, 228,500 cans of meat were conserved, and over 14,500,000 quarts of vegetables and fruits were canned, besides a large quantity of jelly and other preserves, and also dried and brined products. Poultry and eggs valued at $2,500,000 were produced, and over 3,000 family cows were placed on farms. County home demonstration agents were employed in 567 counties in southern territory.

Northern and Western States.

Special stress has been laid on the formulation of definite programs of community and county work through the joint action of the farming people and the 1,213 extension agents in the northern and western states. Increased attention was given to marketing problems and the formation of co-operative associations.

Home demonstration projects were conducted in 17,399 communities, and over 1,330,000 people were reached. Much attention was given to problems of food and diet for adults and children and to sanitary conditions on the farm and in the home. Economy, of time, effort, expense, and materials in making and repairing clothing was stressed. Improved home management was encouraged, aided by the installation of water systems in farm houses, procuring better household equipment, and keeping household accounts. Poultry and egg production and selling has been the farm home industry especially promoted by the home demonstration agents working in 239 counties in the northern and western states.

The total enrollment in boys' and girls' club work, the report states, was 216,479. The agricultural colleges offered 730 scholarships and conducted short courses for 3,383 boys and girls. Significant of the way in which club work stimulates a desire for more instruction is the fact that over 1,800 former club members were enrolled during 1920 in the four-year courses in agriculture or home economics at various agricultural colleges.

Increase in Experimental Work.

The Office of Home Economics increased its experimental work somewhat during 1920. This related chiefly to problems of relative food value and selection, meal planning, food requirements of children, special studies of cooking and canning processes, and of the relative efficiency of different fuels in food preparation. Some studies were also made on the selection, repair, and care of clothing and household equipment.

The service continued to aid farmers' institutes and agricultural schools by supplying information through publications and otherwise, by lending lantern slides prepared in the Department of Agriculture, and preparing subject matter for teachers of agriculture. Subjects for courses of study in agriculture

were prepared in co-operation with the Federal Board for Vocational Education under the provisions of the Smith-Hughes act and in co-operation with state departments of education and the agricultural colleges.

Alaska and Insular Stations.

The experiment stations in Alaska and the insular possessions have continued the work for diversification of agriculture in their respective territories. The importance of diversification has been realized in Porto Rico during the past year as never before, because of the fall in price of sugar and the unsettled economic conditions resulting therefrom. The station is well prepared as a result of its year of experimental work to teach improved methods of diversification of agricultural production. It is doing what it can to disseminate the results of its work through publications and extension work, but there is urgent need of a much more comprehensive system of extension work by local agents among the large and for the most part uneducated agricultural population of the island.

At the five Alaska stations the unfavorable weather conditions in recent years have emphasized particularly the importance of the plant-breeding work with Siberian wheat, barley hybrids, oats, potatoes, and strawberries which the stations have been carrying on for a number of years. Grain growing has been very successfully promoted by the work of the stations. It is reported that in the Tanana valley alone farmers produced in 1920, 3,000 bushels of wheat, 2,000 bushels of oats, and nearly 1,000 bushels of barley. At the Matanuska stations one field of wheat yielded 40 bushels per acre. The animal production station on Kodiak Island has demonstrated that tuberculosis may be eradicated from a herd of cattle under Alaskan conditions, while at the same time healthy calves are being produced by the herd. There is great need for extension work in Alaska, since many of the settlers have had little experience in agriculture prior to taking up homesteads, and distribution of information by printed documents is slow and unsatisfactory.

The Hawaii station at Honolulu on the Island of Oahu, with substations on other islands, is continuing its efforts to increase the number of profitable agricultural industries and especially to make these islands self-supporting in food production. Special attention is being given to programs of production, utilization, and preservation of native food, such as bananas, rice, taro, starch, fruits, and nuts. Extension work is being vigorously conducted on the different islands, a number of extension centers having been established among different races of people with great success. Considerable attention is being given to livestock. Poultry production has been greatly stimulated.

At the Guam station much attention is being given to improvement of rice culture and to forage-crop investigations with a view to providing for increased livestock production. The work of grading up the livestock of the island is attracting much attention. Very gratifying success has attended the extension work through boys' and girls' clubs for growing corn, beans, roots, vegetables, pigs and poultry.

The Virgin Islands station is giving particular attention to increasing and improving the culture of vegetables and fruits essential to the people of the islands, but which at present are very largely imported. Much attention has been given to the introduction of improved forage plants with a view to increasing the animal production of the islands.

Flushing Ewes Increases Lambing.

Breeders of purebred sheep have long recognized the value of the practice of flushing in increasing the percentage of lambs produced by the flock, but until recently there have been no figures to show the definite results of this system. Now, as a result of experiments conducted on government farms in Maryland and Vermont, the United States Department of Agriculture is able to show to what extent the breeders were correct in their estimate.

Flushing, in the language of sheep raisers, means the generous feeding of the ewes during the breeding season to reduce the number of lambless ewes and to increase the number of twins. In the department experiments, covering 302 lambings of 143 different ewes, the flushing system increased the number of lambs dropped by 18.1 per cent. In an ordinary flock the results should be even more striking, as the ewes employed in this demonstration were always kept in better condition than those in the general run of farm flocks.

The ewes not flushed were fed on a ration that was intended to maintain them at the original weight. The others received never less than one-half pound of grain daily and in a few cases it was as much as three-fourths of a pound a day.

The smallest result obtained in any of the lots was an increase of 3.2 per cent in the number of lambs. From September 10 until they were in lamb these ewes gained only 6.3 pounds per head. The most pronounced increase in lambs dropped by flushed ewes over those not flushed was 30 per cent. These ewes gained 12.38 pounds in weight during the breeding season. All of the ewes were Southdowns. Breeds ordinarily having a larger percentage of lambs can be expected to give larger returns from flushing. Also, because they are usually thinner at the time of flushing, farm ewes should give better results than were obtained in these experiments. In order to produce the largest number of twins ewes should gain 7 pounds or more during the breeding season.

Potato Raisers Use Tractors.

Power farming has shown itself to be peculiarly adaptable in the potato growing regions of the country. Of course, the processes of soil preparation are all handled exceptionally well by tractor power. The planting too can be done by machines drawn by tractors. A number of large growers are using motor cultivators for all the tillage work, and in the harvesting the tractor-pulled potato digger of today is the logical evolution of the old back-breaking spading fork.

In 1866, by the methods then in use, it required 108 hours of a man's time to produce one acre of potatoes with a yield of 220 bushels. Using modern machinery, the time required to do the same amount of work has been reduced to 38 hours, a saving of approximately 65% in time.

At present prices and using the old method,, the cost of producing an acre of potatoes was $13.18. Up-to-date equipment has brought this cost down to $5.95, a saving of approximately 54% in actual cash.

The addition of anti-friction roller bearings, encased in dust-proof enclosures, represents a recent and important step in the perfection of the potato digger and it has been proven through actual field tests that a machine so equipped requires much less power and is far more dependable than one with plain bearings.

Length of Stall Room.

What is the general length for Holstein cow of the floor space allowed between a swinging stanchion and the end of the trough that cow may rest comfortably at night?—J. M. D., Mesa County, Colo.

The usual length to be allowed is 5 to 5½ feet, measuring from center line of stanchion to the edge of the gutter. The width recommended for Holsteins is 4 to 4½ feet.

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Stock Show Optimism.

That the livestock industry is the backbone of the west's agriculture has been shown again in a most unmistakable way during the recent National Western Stock show. The 1922 exhibition was remarkable in one respect—it marked a revival of optimism among the breeders of cattle, hogs and sheep, and demonstrated that the producers of beef, pork, mutton and milk were facing the future with more than mere hope in their hearts. In fact, they are harboring the expectation of profits once more after the lean months that set in with the fall of 1920.

Reasons for revival of business are apparent. Agriculture has taken its cut in values; the losses have been charged off and business is being done on a new basis, with feedstuffs and labor low, with demand for the finished product of the livestock farm nearing normal and credits loosening up There is a great difference in the feeling among livestock producers and farmers in general now as compared with six months ago, when hopeful men were the exception. Troubles still face many of us in the agricultural game; we are not clear out of the woods, but complete recovery of the industry is as certain as the succession of day to night

The man who keeps the goal in sight, who knows that the world never stands still, who realizes that this great surplus crop producing region of the West is first to be called upon to feed convalescent nations now coming out of the turmoil of war and its aftermath, may whistle and sing for the good times coming. Let us lay the foundations of returning prosperity wisely and well—and that means on the rock of livestock, which spells economy, fertility, permanence and profits. Truly the note of optimism voiced by thousands who came to the big show, has sound reason for expression as all of us may realize when we think it over.

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The Farmer's Voice.

The American Farm Bureau Federation is two years old. In that brief period the organization has made tremendous progress, due to wise leadership and to the fact that conditions demanded a close alliance of farmers along sane, conservative lines, for the betterment of their own business without jeopardizing the rights and privileges of any other class. In another column will be found a summary of accomplishments of the American Farm Bureau Federation—the Thirty Points. Every farmer should read this carefully, for it shows how history has been made for the advancement of agriculture in a way hitherto unparalleled. The closing paragraph sums up the accomplishments as a whole, in the following:

"Carried forward the aspirations of the American farmer to secure economic and social justice for agriculture, and a square deal for all the people."

The Farm Bureau has justified its existence in a far shorter period than was expected when the preliminary organization meeting was held at Chicago in November, 1919. At that time views on fundamentals that should govern were widely divergent. Leaders were assembled from all parts of the United States. They approached pending problems with a determination to work unitedly for agriculture, never forgetting that success could only crown their efforts if they played fair with the public. This has been the guiding principle—justice to the producer, but not at the cost of the consumer.

Price raising, price fixing and other artificial methods of solving economic problems have been given scant consideration. Co-operative marketing, reducing handling costs, eliminating unnecessary movement between producer and consumer — these have been stressed. And then there has been a constant appeal to the powerful force of public opinion, through wise use of the farm and city press, wherever that means could be utilized. Thus has been built up, in two short years, the gigantic organization that, for the first time in American history, speaks with authority for the American farmer.

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Agriculture Starts Over.

At the Stock Show luncheon of the Denver Civic and Commercial Association recently Governor Shoup of Colorado aptly illustrated the condition of the farmer with a story. A farmer who was hard hit by the slump in farm prices determined to end it all by committing suicide. He wanted to make a complete job of it, so he went to a drug store and purchased a dose of the most virulent poison that could be procured. Next he went to a hardware store and bought a six-shooter. Then to the grocer's for a gallon of kerosene, a box of matches and rope enough to hang himself.

Thus equipped for his last journey he went to the river bank and got upon a raft which was moored under a tree. He threw the end of the rope over a limb and making a noose, put it around his neck. Then he swallowed the poison, poured the kerosene over himself, setting fire to his clothing. Next he raised the gun and put his finger on the trigger. Just then the boat gave a lurch, the gun was discharged, the bullet cut the rope, the raft slipped out from under him and he fell into the water, which put out the fire. At the same time he swallowed so much water that it caused him to throw up the poison. Refreshed by his ducking he decided to swim out and, with a few swift strokes, was on shore, ready to buck the game once more.

That tells the story of agriculture in a nutshell. The farmer was discouraged; his first implse was to give up, but events are shaping themsevles so that he is getting a new start. Government credits are being extended through the War Finance Corporation which has loaned out over $90,000,000, forty-five per cent of it west of the Missouri river, in the livestock country.

Governor Shoup said he did not seek to disparage that timely aid, nevertheless he would urge the agricultural industry to regain its own footing as quickly as possible. These loans, he declared, will be harder to repay than they are to get, and any industry that expects permanence must be made to pay in and of itself. In other words, War Finance Corporation loans are a temporary expedient, but the success of the movement has emphasized more than ever the need of a better system of credits than is provided through established channels which are formed too largely for the convenience of the mercantile business.

The Governor stressed the need for more adequate financing of the agricultural industry and for more orderly marketing by the co-operative plan

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Parsons On Rainmaking.

Making rain is not a chemical operation; it is a physical one. The direct cause is the contraction of the air by a lowering of the temperature. Warm air holds much moisture; cold air very little. When the warm air gets chilled it contracts, the invisible air vapor must occupy less room. It contracts also, or as we say, it condenses and forms fog globules, clouds in fact. Then if the process goes on the globules begin to run together and down comes the rain. Thunder vibrations shake these globules together with a rush and the downfall may be short but heavy at such a time.

Now you will say, what causes the cold which condenses the air vapor? The answer to this is a low pressure area, which is shown to be present by the barometer. The cold air drops down to fill the hollow between the waves caused by the low pressure area. When this happens clouds form in low according to the amount of moisture present.

In winter and spring these low-pressure areas may be very large. In summer they are usually smaller and more sporadic, inducing thunder storms.

It has been estimated that if the clouds involved were stationary it would require 50 billion cubic feet of saturated air or cloud vapor to yield half an inch of rain over one square mile, in which case the cloud stratum would be half a mile thick.

When the precipitation is heavy it is caused by fresh clouds passing over continuously and parting with their water as they go.

There is no known chemical or gas which will contract air and cause rain, in fact, the more gas the more expansion and the less likelihood of rain. The rainmaker as a rule does not know that the main currents of air are always moving across the continent from the west and northwest towards the east and southeast, therefore he does his monkey tricks with chemicals and such in the center of the area where the rain is supposed to fall; but in a few hours his gas is a hundred miles away and even if it produced rain it would probably fall in some other state.

The factors which produce rain are too stupendous to be even affected in the slightest degree by anything a mere mortal could do, don't you think so?—E R. Parsons.

Recognizing Value of Agricultural Colleges.

The growing recognition of the importance of the agricultural and mechanical colleges of the country is attested by the fact that the Commissioner of Education, Hon. John J. Tigert, has asked the New Mexico College of Agriculture and Mechanic Arts, along with the other land-grant colleges of the country, to prepare a complete history of the institution from its beginning to the present time.

The Commissioner feels that this work should be prepared as a contribution to the history of education in the United States. The land-grant colleges, through their schools of agriculture and of engineering, have had a large part in the development of the agricultural resources of the nation. This is especially true of the western states. It is highly important that the history of their work should be prepared and kept up to date.

The educational work of these colleges is not confined to the campus. Through the findings of the experiment stations, distributed through bulletins, through the farm papers, and through the activities of the extension division, the agricultural colleges more than any other institutions of learning in the United States, are carrying their work off the campus and out to the people of the state. These schools are conducting a continuous program of education. After the young men and women graduate from the college and get out into the agricultural activities of the community, they are continually kept in touch with the new movements and findings in agriculture, through the publications of the experiment stations and the activities of the extension division.

The Bureau of Education is recognizing the great contribution to education which these institutions have made and is planning to give it a recognized place in the history of education of the country.

The death of Senator Boies Penrose of Pennsylvania leaves Senator Porter J. McCumber of North Dakota in line for the chairmanship of the Senate Finance Committee.

This means that the committee, which is directly concerned with tax and tariff legislation, for the first time since the Civil War will have as its head a man coming from the west. Senator McCumber is a member of the agricultural bloc.

News of the Farm Bureaus

Colorado Man on Livestock Board.—C. E. Collins of Kit Carson, Colo., was made vice president of the National Livestock Producers' Association at its recent meeting in the Chicago office of the American Farm Bureau Federation. The other officers are John G. Brown of Indiana, president; and E. M. Cunningham of Iowa, secretary-treasurer. Mr. Collins is a Hereford breeder and has extensive land and banking interests in eastern Colorado. He has been an active member of the Committee of Fifteen which has worked out the plan for co-operative marketing of livestock. The officers constitute the executive committee of the National Livestock Producers' Association. Urgent requests were received to establish terminal commission associations and the allied stocker and feeder companies at the following markets: Chicago, Indianapolis, Pittsburgh, Cleveland, Buffalo and Detroit. The national board of directors decided to undertake a thorough investigation of the conditions surrounding each market during the next thirty days before authorizing the establishment of any terminal commission company. No co-operative company will be established at any terminal before the trade prospects warrant it as a good sound business venture. The board of directors and the officials are serving during the organization period without compensation.

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Have You Paid Your Dues?—Every Colorado county Farm Bureau is urged to send in all 1921 dues on hand and any 1922 dues recently collected. The initial expenses of the membership campaign will be very heavy; besides, there are many bills that should be paid at once. Send in any amount you may have as soon as possible, to Secretary Frank R. Lamb at Penrose, Colo.

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Explains Agricultural Bloc.—"The agricultural bloc is a landmark of national progress. The agricultural bloc is responsible for practically every item of constructive legislation passed by Congress in the last six months. The agricultural bloc was born in the Washington office of the American Farm Bureau Federation." Thus declared President J. R. Howard of the A. F. B. F. before the third annual convention of the Minnesota Farm Bureau Federation in St. Paul recently. "Much has been said of late regarding class legislation and the development of class consciousness. No organization has been more pronounced in opposition to either than has the American Farm Bureau Federation. Repeatedly we have said that there is but one interest in this country, and that is the interest of the whole American people. The farmer's income creates the bank balances of the nation. If his prosperity were doubled or trebled, the prosperity of industry and commerce and transportation would likewise be enhanced. Let me, however, point out two essential differences between the agricultural bloc and the other blocs. First, the agricultural bloc is the only bloc which has been organized without selfish motive and in the interests of all our citizenry. Second, the agricultural bloc is the only bloc that has ever proceeded with its cards on the table face up and without secret or closed door caucuses. I hope and trust that the time may come in our national life when we will have that increasing degree of statesmanship and decreasing degree of national politics which will equally serve the interests of the whole country without the necessity of the formation of blocs or cliques or factions. The American Farm Bureau Federation has been faithfully and persistently pressing the needs of agriculture before Congress through the agricultural bloc, in co-operation with other agricultural societies, and through our own organization. We feel we have a vital part in the passing of needed legislation as well as in the awakening of a national agricultural consciousness. Let me warn you, however, as farmers, and the same warning is needed equally by others, that it is not a function of the government to do for us what we can best do for ourselves."

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Arizona Gets 'Em Together—A statewide industrial conference was held in Phoenix, December 15—16, at the instigation of the Arizona Farm Bureau Federation. President Chas. S. Brown made one of the principal addresses and showed that agriculture must be prosperous before other industries can thrive. The conference was called in order that representatives of each industry in the state might understand the problems confronting every other industry and work in mutual helpfulness. Included in the list were representatives of agriculture, stock raising, mining, lumbering, merchandizing, professional activities and public utilities. The slogan of the meeting was "Arizona Forward." At the close of the sessions those in attendance had a much more tangible idea of each other's problems. The outcome of the conference was the formation of a permanent Arizona Industrial Congress, with officials and directors representing the principal industries of the state. Fred Tait, chairman of the executive committee of the Arizona Farm Bureau Federation, is a vice president of the Congress, while L. C. Wilson of the Arizona Farm Bureau Federation's marketing committee is a member of the executive committee. It is stated that the congress will be of the same sort of service to the state as a whole as the Farm Bureau is to the farmers.

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Corn Moves to Starving Russia.—The purchasing committee for Russian relief has contracted for more than 3,000,000 bushels of corn by January 1. One steamer carrying 20,000 bushels sailed on December 31 from New Orleans, according to Don Livingston, formerly Commissioner of Agriculture of South Dakota, who was made a member of the purchasing committee at the suggestion of the American Farm Bureau Federation. Mr. Livingston said. "This grain

(Turn to Page 16)

From the Nation's Capital

AGRICULTURAL CONFERENCE DISCUSSES MANY REMEDIES TO AID THE FARMER AND STOCKMAN.

E. E. REYNOLDS.

PRESIDENT Harding's national conference of agriculture at the New Willard Hotel during the week ending January 28, brought together a large number of farmers, farm organization leaders, and representatives of co-related industries. More than 300 delegates and a large number of visitors were present. Every phase of agriculture in every part of the nation was represented.

The conference was opened with an address by President Harding in which he declared himself in sympathy with the plight of agriculture and suggested the following remedies:

"An adequate system for financing crop and livestock production and marketing, co-operative marketing associations; improvement in market news service, development of the St. Lawrence river for ocean traffic; the reclamation of waste lands for agricultural purposes by drainage and irrigation."

Secretary Wallace announced the purpose of the conference to be consideration of the present agricultural depression and remedies for it, and also the development of a permanent agriculture policy. He suggested that constructive efforts might be directed in three fields—legislative action, administrative and educational efforts, and individual efforts of farmers through their own organizations.

Representative Sydney Anderson, chairman of the conference, in an address on "Agricultural Prices and the Present Situation," said that when he considered the desperate character of the situation, he wished there was some means of relief through legislation, but he was persuaded that relief can come only through a more sufficient organization of producers.

Professor G. F. Warren of Cornell University, who had just returned from abroad, said that agriculture in Europe is getting back to normal more rapidly than other industries. Efforts are being made to be self-sufficient, so that no importing will be required. This means less dependence upon America for foodstuffs. President A. Sykes of the Corn Belt Meat Producers' Association, declared steps must be taken immediately to assist farmers who are under obligation to make payments during the next few months. Unless relief is afforded many will be ruined.

Speaking for the packers, Thomas Wilson of Chicago, said the severe depression in agricultural values has been a great factor in reducing the value of the packers' output, upsetting stability by forcing livestock products below the level of commodity values. He maintained that the packers had done everything in their power to assist stockmen.

Fred H. Bixby, president of the National Livestock Association, said conditions were deplorable in the range country. His remedies were a reduction in the overhead, insistence by the producers that the retailers curtail their profits, extension of term of War Finance Corporation loan, and interest reduction, pre-war commission charges and co-operative commission houses. He said the cattle producers in the west are opposed to transfer of the forest service from the Department of Agriculture to the Department of the Interior.

J. M. Anderson, president Equity Co-Operative Exchange of St. Paul, discussed the need of an open market for farmers. He believed the government should lay down rules governing grain markets rather than permit dealers to frame and enforce them.

The outstanding results of the conference will be congressional action providing credits for production and marketing, legalizing co-operative marketing, and the focusing of public attention upon the agricultural situation and the dependence of all other industries upon agriculture.

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A Bill to Provide Assistance for Co-Operative Marketing.—The creation of a federal marketing board to provide for the organization of co-operative marketing associations is the object of a bill introduced in the senate by Senator McCumber of North Dakota. The board is composed of five members having expert knowledge in co-operative marketing of farm products and livestock. The duty of the board consists of gathering information as may be useful in co-operative marketing of farm products, to devise a system of co-operative marketing, and establishing and maintaining terminal markets for the products of co-operative marketing associations. The bill provides that there shall be in every state a state co-operative agency to organize associations for co-operative marketing of agricultural products. The state agency is required to assist local associations by acting as agent in arranging for financial assistance, storage facilities, or in marketing. The membership of the local associations is limited to persons engaged in the production of farm products.

::::

Proposes Amendment to Federal Farm Loan Act.—A bill designed to carry out the recommendations of the joint commission of agricultural inquiry has been introduced in the senate by Senator Lenroot of Wisconsin, and in the house by Representative Anderson. It amends the federal farm loan act by establishing a farm credits department in each federal land bank and provides credit to farmers on warehouse receipts and livestock, running six months to three years. It is the application of the federal farm loan system to short-time production and marketing credits, with power to discount for any national bank, state bank, trust company, incorporated livestock loan company, or savings institution, with its indorsement any obligation the proceeds of which have been advanced or used for agricultural purposes, or for raising, fattening or marketing livestock.

::::

Objects to Proposed Forestry Service Transfer.—The American Farm Bureau Federation is receiving many resolutions and statements objecting to the proposed transfer of the forestry service now in the Department of Agriculture to the Department of the Interior. The Colorado State Farm Bureau Federation has written to Representative Charles B. Timberlake, saying that "there is a growing concern among the farmers relative to the danger of the removal of the Forestry service from the Department of Agriculture, where they wish it to remain, to the Interior Department, where they dread to see it placed."

"All our relationships with the Forestry service," the letter says, "touches on agricultural matters, and we would deplore a change that would bring us up against a department that is not organized for the development of agriculture and is not intimately concerned with agricultural problems. Our stockmen graze their stock in the forest reserve, and in making arrangement for grazing privileges they desire to deal with agents of the Department of Agriculture, which is concerned intimately with livestock development.

"Our farmers in the irrigation districts are likewise concerned and they see keenly the danger of placing responsibility of watershed protection for the conservation of our stream flow in the department that does not understand the agricultural problems and the agricultural needs that are so dependent upon the proper development of a watershed country, such development including as it does agricultural activities such as forest conservation and reforestation."

Farmer Putnam

In the next issue we will publish a farewell announcement regarding Farmer Putnam.

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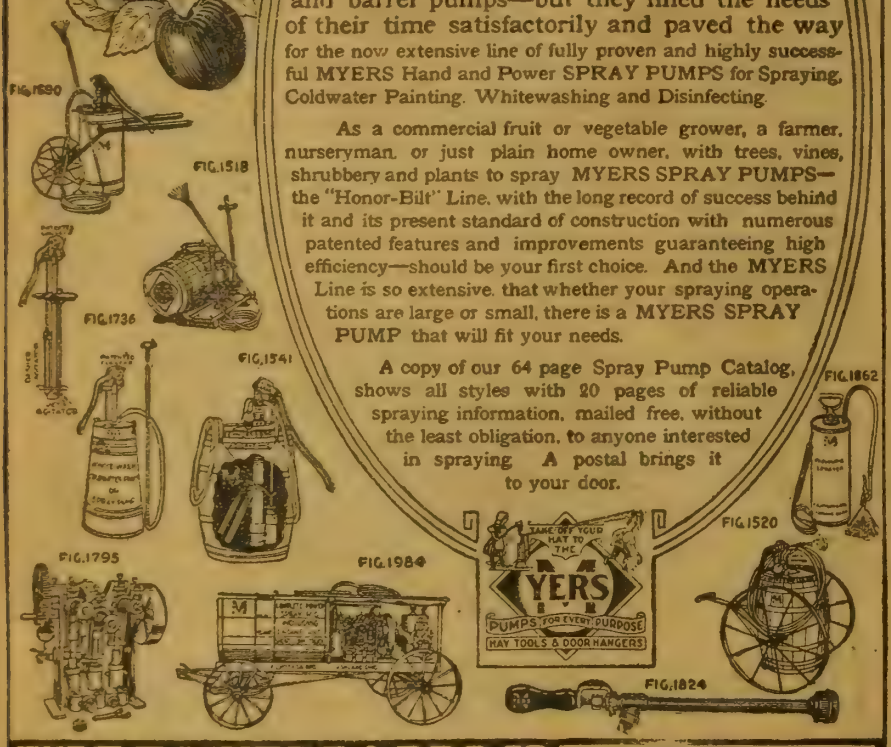

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Boys' and Girls' Clubs at The National Western Show.

That there need be no fear of the future of farming in the Intermountain region was amply shown by members of boys' and girls' clubs in their demonstrations and exhibits at the National Western Stock Show. Colorado acts as host to visiting teams from neighboring states each year, New Mexico and Wyoming sending their state prize winners as guests of the Stock Show association. Six demonstration teams came to Denver from Colorado and neighboring states. The young people and their chaperons were quartered at the Hotel Metropole, the Stock Show association bearing the expense of meals and lodging. The Colorado State Bankers' association, through the instrumentality of George T. Wells and Paul Hardy, acted as hosts for the boys and girls at the annual banquet on Thursday night

In stock judging, Colorado won this of Stock Show week.
year, the winning team being from Delta county, where there is no county agent or paid leader to guide and assist. The Delta county team won out over Wyoming and New Mexico in a spirited contest, the scores being respectively, 1,241, 1,224 and 1,119. The three young men who turned the trick for Colorado were Burton Seeley, Wallace Egbert and Edgar Egbert.

Burton Seeley started in club work when Delta county had a county agent and after the office was discontinued, the young man decided to keep on without supervision. Practical experience and home study of the subject of stock judging in books and bulletins were the means of making this the prize winning team. The prize in this contest was the Western Farm Life pennant, which was formally presented at the banquet on Thursday evening.

Two classes of hogs, fat barrows and Poland China gilts, one class of Hereford bulls and two classes of Holstein cows were judged by the contesting teams. L. P. McCann, county agent of Mesa county, was the judge in charge, assisted by B. W. Fairbank of the Agricultural College, who scored the dairy cattle.

High man in the judging contest was Wynne Clark of Wyoming, with 428 points. His work aroused the admiration of adult judges watching the contest. He was quick and sure in his judgments.

The outstanding feature of the boys' and girls' work at the show was the exhibition and marketing of finished carloads of hogs—the ultimate in pig club work, which has been achieved after some years of effort in drilling young people in the essentials of selection, breeding, feeding and care. This particular job was put over by Colorado, under the direction of Walter R. Freeman, Assistant State Leader, who specializes in pig club work. Boulder and Larimer counties participated, each bringing two carlots of fat hogs to the show. Boulder county got first on a car of Durocs in the club contest and third on the same car in the open classes. This car was composed of the original purchase of twenty-five hogs which were distributed among sixteen club boys, fed, fattened, re-assembled and shipped as one lot—remarkable proof of their uniformity of type and skill in feeding and finishing out so that there were no cut-backs.

The boys bought their hogs from Boulder county breeders, who financed the deal and gave considerable time to supervision of the fattening process. Burt Hart, the well known Longmont breeder, was on the job from start to finish, coming in with the hogs and staying with them till they went to the packer. That Boulder county has a woman as county club leader did not hinder the success of the hog fattening project, because it happens that Josephine Lee Ferguson knows how to keep young people working and older people from falling asleep on a worth-while job of community betterment. She had the willing aid of several breeders and an enthusiastic lot of young pig growers to insure success of the project.

The prize winning carlot broke a record when it came to the auction block, selling for 12 cents a pound, 50 cents above the grand champion barrows of the show. The Coffin Packing Co. were the successful bidders, there being strong competition among the packers for the distinction of handling the pork produced by the Boulder county pig clubs.

Larimer county got second and third on their cars of fat hogs, the one being Durocs and the other a load of mixed hogs. All brought good prices, the second prize car selling for 9 cents, the third for 8¼ cents and the fourth for 8½ cents.

John Clay & Co. handled the shipment of club hogs at the yards.

The Girls' clubs prize winners were announced as follows:

First year sewing—Goldie Weeden, Two Buttes, first, 96%; Stella Michaud, Loveland, second, 92%; Bertha Diederman, Longmont, third, 90%.

Second year sewing—Hope Fitzpatrick, Loveland, 92%; Jessie Drinkwater, Colorado Springs, second, 90%; Hazel Lucas, Longmont, third, 86%.

Third year sewing—Jessie Drinkwater, Colorado Springs, first, 95%; Enid Galley, Colorado Springs, second, 92%; Elizabeth Landolt, Longmont, third, 88%.

Canning—Jane Hubbell, Denver, first, 94.5%; Alice O'Brien, Fort Collins, second, 93.5%; Selma Edmonds, Powell, Wyo., third, 88.5%; Laura Garrett, Ft. Collins, fourth, 87.5%; Hazel Fichtel, Hayden, fifth, 86%.

Miss Maude Sheridan, State Club leader; Walter R. Freeman, Assistant State Leader, and the state leaders of Wyoming and New Mexico, together with various county club leaders, were in charge of the round up and exhibit.

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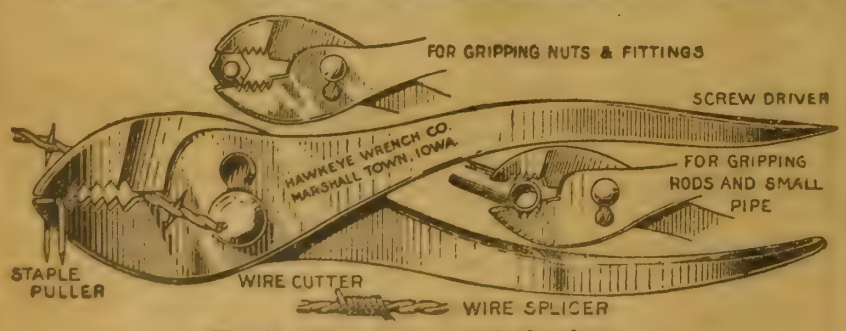

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A STRIKING ARTICLE IN NEXT ISSUE

What Is the Future Prospect for Land Values?

By GILBERT GUSLER.

Mr. Gusler has made an exhaustive study of the underlying principles that affect land values. He points out the fact that prices rose steadily up to 1920, but are now going through the first setback in a quarter of a century—that the average values are now higher in many cases than the earning capacity of the land and that land and rents must come down or farm products go up. To illustrate the importance of this subject, Mr. Gusler very aptly remarks: "Possibly before and certainly ever since Abraham and Lot found it necessary to divide the land to keep their herdsmen from quarreling, Lot taking the plain of Jordan and Abraham the land of Canaan, there has been a land problem. In each passing century it has become more acute. Many of the greatest events in human history, wars, immigrations and political struggles, have been based on a land problem."

Our land problem as it confronts us today will be very skillfully and entertainingly discussed in Mr. Gusler's article. Watch for it in the February 15 issue.

Special Features in This Issue:

Report of National Western Stock Show.
Market Outlook for Farm and Ranch Products.
Colorado Alfalfa Needs No Fertilizers.
Relation of Cash Rental to Farm Values.
Growing Head Lettuce at High Altitudes.
Mr. Reynolds' Letter, "From the Nation's Capital."

Be sure to read these special articles in this issue. They all contain much valuable information that will help you to conduct your farm or ranch operations with greater success and with more satisfaction and pleasure.

Pass your copy of Western Farm Life along to a neighbor after you are through reading it. Your neighbor, too, will find many helpful and interesting things in it to read. In these "hard times" the neighborly exchange of good reading material is very commendable.

Livestock Share Lease.

In reply to the inquiry of Mr. F. P. Brown of Telluride, Colo., regarding an equitable lease for his farm: He states that he has a farm worth approximately $12,000, and 1,000 acres of pasture land worth $10 per acre, machinery to run the ranch and 150 head of cattle. His question is what share of the proceeds should he give the renter and what would be an equitable lease for three years' time, the renter taking full charge of all the work, looking after the cattle and keeping the place in repair.

In regard to an equitable lease for this farm I would suggest the Livestock-Share or Mutualized Risk Lease. This is a very fair lease and makes a good division of profits and expenses. In such a lease the third party claims or joint debts, are prior claims for first chance at the profits. The second prior claims to be met are the share of residue claim of tenant and landlord. The most typical lease that we have of this kind suggested is the one put out by the Dakota Farmer, called "Dr. Wendt's Partnership Lease." The outstanding features of this lease are in the obligations assumed by both parties. These obligations are as follows:

The party of the first part shall operate the business, including the marketing of livestock and produce, shall furnish all working force, horses, machinery, hired help, do all the hauling without charge for any improvement of or on the farm, and shall keep all improvements in good repair; it being understood, however, that any labor which must be hired to make improvements shall be paid for by the party of the second part, but party of the first part shall board any such labor at an agreed rate.

Party of the second part places the above described real estate to the use of the partnership during the term of this agreement, and he shall provide at all times good housing for all livestock and produce, furnish adequate fencing, water supply and such other improvements as are necessary.

The above obligations shall be considered equal, and each party shall furnish one-half of the livestock, seed and feed including horse feed.

All livestock and products of the same, such as cream and butter, and all grain and other farm products shall be held on the farm as a partnership holding, and a division shall be made when a portion or all of the same is sold and turned into money; each party hereto thereupon shall receive one-half the income from such sales after the partnership expenses are paid; it being understood that any such sales are to be made only upon specific mutual agreement of the parties or at the time of the termination of this agreement, and any purchase for the partnership shall be made only upon specific mutual agreement.

It is further understood that the party of the first part shall be allowed the use of one acre of land for garden plot in consideration for which he shall work out or pay all road tax levied against the above described property.

It is further understood and agreed by and between the parties hereto that this contract shall constitute a first lien on behalf of the party of the second part for all money loaned to or notes signed with party of the first part, against all of the interest of the party of the first part in the livestock and * * * * * owned by the partnership.

The party of the first part hereby acknowledges receipt of a full, true and complete copy of the within agreement made and delivered by the party of the second part at the time of the execution hereof.

The outstanding feature of this lease is in the credit that the landlord gives the tenant and in the security that the landlord has which comes in the next to the last paragraph. The landlord has first lien on behalf of the party of the second part for all money loaned. In the case mentioned on Mr. Brown's farm an invoice could be taken of the cattle on hand, this invoice being assumed to be a loan to the tenant and the tenant bear the same responsibility as if the landlord had loaned him the money and he had bought the cattle outright.

From experience over the state much more satisfaction and a better feeling of co-operation exists between the tenant and the landlord when the tenant keeps the simple farm account book. These books can usually be supplied by the county agent and the county agent will be glad to work with the tenant and the landlord in keeping the record complete. In the case of Mr. Brown he could secure such a record book from Mr. Baldwin at Norwood.—F. J. Chase, Farm Management Demonstrator, Colorado Agricultural College.

Red and White Holsteins.

Is there a strain of red and white Holsteins?—W. H. H., Sedgwick County, Colo.

Yes, there is a strain of red and white Holsteins. They are very rare in America, but are found in Holland, which is the original home of this breed of cattle.

Dr. Frank Crane says that Thrift simply means the application of thought to money.

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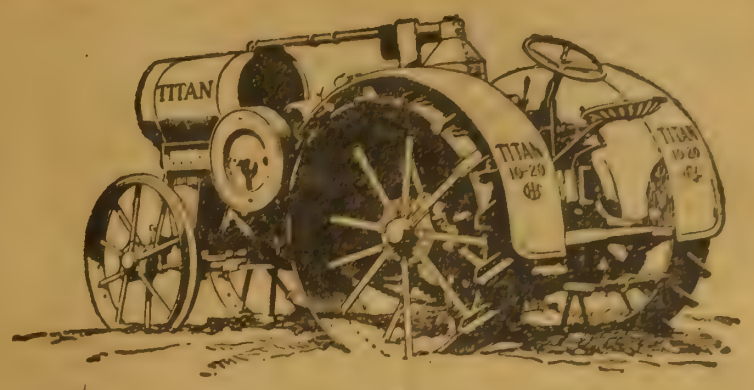

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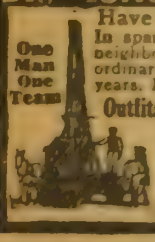

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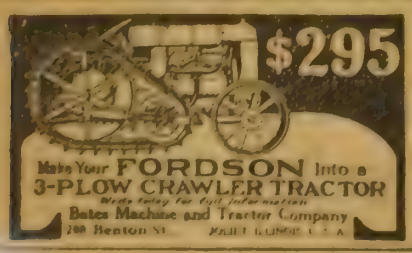

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National Western Show Scores Sixteenth Success.

(Continued from Page 3).

Maxwell-Miller herd bull, second, in the same position he held at Chicago.

Maxwalton Monarch was later made grand champion bull. There were many good young bulls shown in the senior and junior calf classes and in these classes the Allen Cattle Co., Carpenter & Ross, Saunders, Warnock, and others made a strong showing. Ex-Governor A. C. Shallenberger of Nebraska was back in the ring after a number of years' absence from the show. Gleason & Blazer won good placings on some of their Sunnyside Robert stuff. A number of other herds were in from Elbert county, including Carnahan & Sons, C. A. Melburn and A. G. Cornforth. Gawthrop was up again from Mancos, and Thomas Andrews of Cambridge, Neb., was out with a good herd. He has been showing here regularly for a number of years.

R. G. Maxwell from Fort Collins and the Colorado Agricultural College showed a number of animals. A rather interesting placing in the cows was that of Velvet Countess, the Agricultural College cow that has succeeded in winferent years and never has quite been ning second place in the show four difable to nose into first place.

A magnificent line-up of herds and young herds was presented. The competition was as keen as at any show in America this year for upper positions, because the same herds were here that have been at the other big shows.

The Hereford Exhibit.

The Hereford exhibit is a little harder to show improvement on from year to year because of the very large number exhibited at this show coming from the very best herds in the country. So great was the uniformity of quality in many of the younger classes that Mr. Kinzer, the secretary of the American Hereford Association, placed money on many farther down the line than the catalogue called for. The junior yearling heifer class was especially remarkable in the high class of heifers showing at that age.

Of course, the calf classes looked more remarkable on account of the large numbers of good individuals, but there are so many of them that do not develop well as yearlings that this yearling show was worthy of remark.

In the opinion of many of the Hereford men the real bull contest of the show was between Blayney's Domino and a Mousel entry. The body of the Mousel bull was evenly balanced and he had very heavy bone and thick flesh. The Blayney bull also carried a good balance and was superior in masculinity of its head and neck. Mr. Moxley, the judge, lays considerable stress on the heads of breeding bulls and his judgment is in line with that of most breeders.

Blayney's Domino was later made grand champion of the show.

Some new western exhibitors were in the ring, notably Perry Park Ranch of Larkspur, owned by R. P. Lamont, Jr.; Ken-Caryl, owned by John C. Shaffer, and the Phillips Highland Ranch of Littleton. The Highland show herd is essentially from the animals that were in the Hill herd last year. A good lot of animals came from all these breeding herds.

DeWitt, Canary, Baker, Painter, Fulscher & Kepler, and other leading Colorado exhibitors brought out their usual good animals. A. B. Cook of Montana, Jesse Engle & Sons of Missouri, Johnson Bros. of Eagle, Colo., made good exhibits. A number of new breeders from outside of the state brought herds. The awards made a Beau Blanchard-Beau Mischief year out of the exhibit.

One of the most remarkable winnings made during the show was by Andy Christensen of Eagle, Colo., with the progeny of Beau Blanchard 5th.

The Hereford steer show created much interest, particularly in the calf classes. Blayney's senior calf and junior calf, and Baker's senior calf came up together for championship against the Shorthorns, blacks and crossbreds, where the two calves won championship and reserve in the order named.

The real interest, however, was in the junior calf class, where Blayney's calf eventually won over Baker's. Ringside talent was divided in its opinion regarding the two calves. Blayney's calf, after winning the grand championship, was put in the carcass contest and won championship there, winning for the first time in the history of the show, the sweepstakes money offered for the steer which can win both the carcass contest and the championship on foot. Mr. Blayney thus turned a triple trick, as the grand champion bull was the sire of this calf.

The closest competition in the beef carcass division was between the Nebraska University Galloway yearling and Blayney's calf. The Nebraska yearling was well covered, but the calf showed a smaller proportion of meat in the foreribs and shoulders and this seemed to be the deciding point in the minds of the judges.

HEREFORDS.

Judge—Henry Moxley, Shelbyville, Ky.

Exhibitors—Geo. W. Baker, Littleton; W. N. W. Blayney, Denver; Mrs. Wm. Braddock, Chadron, Neb.; Clyde Buffington, Crawford, Neb.; A. J. Campion, Denver; J. D. Canary, Denver; A. Christensen, Eagle; Colorado Agricultural College, Ft. Collins; A. B. Cook, Townsend, Mont.; L. G. Davis, Saratoga, Wyo.; T. F. DeWitt, Denver; J. J. Early, Baring, Mo.; Engle & Sons, Sheridan, Mo.; Foster Live Stock Co., Rexford, Kan.; James Forbes, Crawford, Neb.; Fulscher & Kepler, Holyoke; Glendale Stock Farms, Aspen; Goernandt Bros., Aurora, Kan.; L. C. Grant, Avondale; O. E. Green, Denver; Johnson Bros., Eagle; Ken-Caryl Ranch, Littleton; Kimberling Bros., Champion, Neb.; R. P. Lamont, Jr., Larkspur; McIntyre Ranching Co., McGrath, Alberta, Canada; Thad E. Mendenhall, Fairbury, Neb.; H. J. Meyer & Son, Eastonville; Mousel Bros., Cambridge, Neb.; John E .Painter & Sons, Roggen; Alex. A. Phillips, Goodland, Kan.; Phillips Highland Ranch, Littleton; Dean T. Prosser, Tie Siding, Wyo.; E. C. Rodwell, Cambridge, Neb.; W. E. Sears, Saratoga, Wyo.; S. L. W Ranch Co., Kersey; Gilbert Swinbank, Crawford, Neb.; Wm. Turnbull, Saratoga, Wyo.; E. Von Forell & Sons, Scottsbluff, Neb.; Webb & Conover, Broomfield; John J. Philipps, Goodland, Kan.

Aged Bulls—(7 shown)—1, Blayney on Blayney Domino; 2, DeWitt on Beau Blanchard 75th; 3, Blayney on Beau Liberty; 4, Goernandt Bros. on Worthmore; 5, Phillips Highland Ranch on Highlander; 6, Goernandt Bros. on Excellent Ion.

Two-year-old Bulls—(7 shown)—1, Cook on Panama 100th; 2, Mousel Bros. on Anxiety 4th Jr.; 3, Von Forell on Merry Mischief 2d; 4, Ken-Caryl Ranch on Marcus Fairfax; 5, Grant on Ted Mischief; 6, Goernandt Bros. on Polled Harmon 7th; 7, Canary on Repeater 54th.

Senior Yearling Bulls—(9 shown)—1, Engle & Sons on Beau Blanchard 96th; 2, Foster Live Stock Co. on Bennie Boy; 3, Canary on Repeater 55th; 4, Prosser on Dandy Wyoming; 5, McIntyre Ranching Co. on Don Wyoming; 6, Cook on Panama 126th; 7, Kimberling Bros. on Carlos Aster; 8, Sears on Tommy Aster; 9, Campion on Golden Mischief.

Junior Yearling Bulls—(16 shown)—1, Canary on Repeater 66th; 2, Engle on Echo Lad; 3, Von Forell on President Jr.; 4, Christensen on Beau Blanchard 58th; 5, Cook on Panama 129th; 6, Ken-Caryl Ranch on Caryl Domino; 7, Ken-Caryl Ranch on Deacon Domino; 8, Johnson Bros. on Stanway 27th; 9, DeWitt on Punch; 10, Canary on Repeater 63rd Jr.; 11, Burson on Post Entry; 12, Davis on Beau Wyoming.

Senior Bull Calves—(20 shown)—1, Christensen on Beau Blanchard 77th; 2, Baker on Bonnie Lad 23d; 3, Blayney on Wyoming 17th; 4, Mousel Bros. on The Stanway 3rd; 5, Baker on Dale's Mixer; 6, Cook on Panama 140th; 7, Phillips on Domino Brummel Jr.; 8, Johnson Bros. on Gay Boy 155th; 9, Ken-Caryl Ranch on Stephens Fairfax; 10, Foster Live Stock Co. on Royal Domino; 11, Grant on Rex Mischief; 12, Johnson Bros. on Gay Boy 150th.

Junior Bull Calves—(29 shown)—1, Fulscher & Kepler on Perfect Domino; 2, DeWitt on Fairplay 2d; 3, DeWitt on Colorado Fairfax 2d; 4, Fulscher & Kepler on Regal Domino; 5, Buffington on Gay Lad Mischief; 6, Engle & Sons on Beau Blanchard 121st; 7, Fulscher & Kepler on Beau Domino; 8, Blayney on Wyoming Jr.; 9, Engle & Sons on Beau Blanchard 120th; 10, Christensen on Beau Blanchard 84th; 11, Canary on Hillcrest Repeater; 12, Braddock on Elect Domino; 13, Lamont on Tom Thumb; 14, Cook on Beau Panama 11th; 15, Foster Live Stock Co. on Perfect Domino.

Aged Cows—1, Cook on Miss Joy; 2, Cook on Lady Joy 2d; 3, Canary on Miss Repeater 15th; 4, Ken-Caryl Ranch on Dorothea; 5, Braddock on Elope Mischief.

Two-year-old Cows—(8 shown)—1, Cook on Princess Panama 2d; 2, Canary on Miss Repeater 36th; 3, Ken-Caryl Ranch on Agnes Fairfax; 4, Ken-Caryl Ranch on Queen's Mischief; 5, Phillips Highland Ranch on Miss Mixer; 6, Canary on Miss Repeater 39th; 7, John J. Phillips on Queen Mischief 1st.

Senior Yearling Heifers—(8 shown)—1, Mousel Bros. on Blanche Mischief 4th; 2, Phillips Highland Ranch on Miss Highland 3d; 3, Johnson Bros. on Miss Gay 166th; 4, Johnson Bros. on Lady Stanway 2d; 5, Fulscher & Kepler on Ruth Domino 2d; 6, Cook on Lady Panama 95th; 7, S. L. W. Ranch on Addie Oswald; 8, Canary on Miss Repeater 66th.

Junior Yearling Heifers—(26 shown)—1, Mousel Bros. on Crystal Mischief; 2, Baker on Mischief Sabetha; 3, Baker on Bonnie Lass 7th; 4, Engle & Sons on Belle Blanchard 96th; 5, De Witt on Judy; 6, Cook on Lady Panama 100th; 7, Ken-Caryl Ranch on Dutchess Domino; 8, Christensen on Miss Blanchard 35th; 9, Christensen on Miss Blanchard 37th; 10, DeWitt on Lady Ideal; 11, Mousel Bros. on Mischievous 5th; 12, Mousel Bros. on Gwendoline 36th; 13, Canary on Miss Repeater 67th; 14, Canary on Miss Repeater 69th; 15, Phillips Highland Ranch on Ruth Mischief.

Senior Heifer Calves—(19 shown)—1, Baker on Mixer's Princess; 2, Baker on Capitola 77th; 3, Fulscher & Kepler on Lady Domino 8th; 4, Engle & Sons on Belle Blanchard 111th; 5, Canary on Miss Repeater 74th; 6, Engle & Sons on Belle Blanchard 108th; 7, Johnson Bros. on Miss Gay Lad 189th; 8, Blayney on Dorothy Wyoming; 9, Foster Live Stock Co. on Duchess Girl; 10, Ken-Caryl Ranch on Rebecca 2d; 11, Baker on Mixer's Isabel; 12, Mousel Bros. on Belle Mischief 4th; 13, Grant on Post Entry; 14, Blayney on Hilda Wyoming; 15, Cook on Lady Panama 105th.

Junior Heifer Calves—(31 shown)—1, Fulscher & Kepler on Donna Domino; 2, Baker on Sabetha Mischief; 3, Engle & Sons on Belle Blanchard; 4, Cook on Lady Panama 108th; 5, Cook on Princess P. 18th; 6, Mousel Bros. on Duchess Mischief 3d; 7, Fulscher & Kepler on Belle Domino 5th; 8, DeWitt on Susette 2d; 9, Canary on Miss Repeater 76th; 10, Ken Caryl Ranch on Princess Fairfax 2d; 11, Blayney on Daisy Domino; 12, Johnson Bros. on Miss Gay Stanway 18th; 13, Ken-Caryl Ranch on Carolyn; 14, Fuscher & Kepler on Betty Domino; 15, DeWitt on La Belle 3d.

Senior and Grand Champion Bull—Blayney on Blayney Domino.

Junior and Reserve Grand Champion Bull—Canary on Repeater 66th.

Senior and Grand Champion Cow—Cook on Princess Panama 2d.

Junior and Reserve Grand Champion Heifer—Baker on Mixer's Princess.

Two Bulls Bred and Owned by Exhibitor—(15 shown)—1, Engle & Sons; 2, A. Christensen; 3,

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Geo. W. Baker; 4, J. D. Canary; 5, A. B. Cook; 6, Fulscher & Kepler; 7, W. N. W. Blayney; 8, Johnson Bros.; 9, J. D. Canary; 10, T. F. DeWitt.

Two Females Bred and Owned by Exhibitor—(18 shown)—1, Mousel Bros; 2, Geo. W. Baker; 3, W. N. W. Blayney; 4, Jesse Engle & Sons; 5, A. Christensen; 6, Johnson Bros.; 8 and 9, Fulscher & Kepler; 10, J. D. Canary.

Aged Herds (3 shown)—1, A. D. Cook; 2, J. D. Canary; 3, Ken-Caryl Ranch.

Young Herd—(9 shown)—1, Geo. W. Baker; 2, Jesse Engle & Sons; 3, A. B. Cook! 4, J. D. Canary; 5, T. F. DeWitt; 6, Mousel Bros.; 7, Johnson Bros.; 8, A. Christensen.

Calf Herds—(14 shown)—1, Geo. W. Baker; 2 and 5, Fulscher & Kepler; 3, Jesse Engle & Sons; 4, J. D. Canary; 6, A. B. Cook, 7. T. F. DeWitt; 8, W. N. W. Blayney; 9, A. Christensen.

Get of Sire—(14 shown)—1, Fulscher & Kepler; 2, Jesse Engle & Sons; 3, Geo. W. Baker; 4, Fulscher & Kepler; 5, J. D. Canary; 6, A. B. Cook; 7, T. F. DeWitt; 8, W. N. W. Blayney; 9, Geo. W. Baker.

Produce of Cow—(11 shown)—1, A. B. Cook 2, J. D. Canary; 3, Geo. W. Baker; 4, Fulscher & Kepler; 5, Foster Live Stock Co.; 6, L. C. Grant; 7, Goernandt Bros.; 8, Alex. A. Phillips.

WESTERN HEREFORD FUTURITY.

Senior Bull Calves—(12 shown)—1, Christensen on Beau Blanchard 77th; 2, Baker on Bonnie Lad 23d; 3, Blayney on Wyoming 17th; 4, Baker on Dale's Mixer; 5, Cook on Panama 140th; 6, Johnson Bros. on Gay Boy 155th; 7, Grant on Rex Mischief; 8, Johnson Bros. on Gay Boy 150th.

Junior Bull Calves—1, Fulscher & Kepler on Perfect Domino; 2, DeWitt on Colorado Fairfax; 3, Fulscher & Kepler on Regal Domino; 4, Buffington on Gay Lad Mischief; 5, Blayney on Wyoming Jr.; 6, Christensen on Beau Blanchard 84th; 7, Canary on Repeater 74th; 8, Braddock on Elect Domino; 9, Cook on Beau Panama 11th; 10, Phillips Highland Ranch on Post Entry.

Senior Heifer Calves—(9 shown)—1, Baker on Mixer's Princess; 2, Fulscher & Kepler on Lady Domino 8th; 3, Canary on Miss Repeater 74th; 4, Johnson Bros. on Miss Gay Lad 189th; 5, Baker on Mixer's Isabel; 6, Grant on Edith Cavel 2d; 7, Cook on Lady Panama 105th; 8, Buffington on Mischief Lady.

Junior Heifer Calves—(18 shown)—1, Fulscher & Kepler on Donna Domino; 2, Baker on Sabetha Mischief; 3, Cook on Lady Panama 108th; 4, Cook on Princess P. 18th; 5, Fulscher & Kepler on Betty Domino; 6, DeWitt on Susette 2nd; 7, Canary on Miss Repeater 76th; 8, Blayney on Daisy Domino; 9, Johnson Bros. on Miss Stanway 18th; 10, Fulscher & Kepler on Belle Domino 5th.

Champion Bull Calf—Fulscher & Kepler on Perfect Domino.

Reserve Champion Bull Calf—Fulscher & Kepler on Perfect Domino.

Champion Heifer Calf—Baker on Mixer's Princess.

Reserve Champion Heifer Calf—Fulscher & Kepler on Donna Domino.

SHORTHORNS.

Judge—Frank Brown, Carleton, Ore.

Exhibitors—Allen Cattle Co., Colorado Springs; Thomas Andrews, Cambridge, Neb.; C. S. Bratt & Sons, Arapahoe Neb.; Joseph Brunelli, Walsenburg; A. Carnahan & Sons, Elbert; Carpenter & Ross, Mansfield, Ohio; Colorado Agricultural College, Fort Collins; Cornforth Live Stock Co., Elbert; C. G. Gawthrop, Mancos; Gelston Bros., Elk City, Neb.; Gleason & Blazer, Kiowa; George L. Gross, Fort Collins; Haskins & Ogden, Republican City, Neb.; C. Hauf, Glendo, Wyo.; A. Hultine & Sons, Saronville, Neb.; A. L. Lamp, Inland, Neb.; Lamp & Hultine, Inland, Neb.; Maxwell-Miller Cattle Co., Littleton; R. G. Maxwell & Sons, Fort Collins; C. A. Melburn, Elbert; Lillian M. Melburn, Elbert; Multhaup Bros., Arriba; C. A. Saunders & Sons, Manilla, Iowa; Frank Scofield, Hillsboro, Tex.; A. C. Shellenberger, Alma, Neb.; State Industrial School, Golden; E. M. Varin, Victor, Idaho; D. Warnock & Sons, Loveland; A. L. Woodmansee, Evans.

Aged Bulls—(6 shown)—1, Carpenter & Ross on Maxwalton Monarch; 2, Maxwell-Miller on Princely Stamp; 3, Colorado Agricultural College on Lord Douglas; 4, Hultine & Sons on Lord Barmpton; 5, Maxwell & Sons on First National; 6, Lamp on Christmas Goods.

Two-year-old Bulls—(7 shown)—1, Warnock & Sons on Supreme Model; 2, Carpenter & Ross on Maxwalton Evolution; 3, Carpenter & Ross on Maxwalton Marumot; 4, Haskins & Ogden on Village King; 5, Gelston Bros. on Baron's Pride; 6, Hauf on Edgecote Knight.

Senior Yearling Bulls—(5 shown)—1, Andrews on Matchless Marshall; 2, Lamp on Master Uneeda; 3, Multhaup Bros. on Village Clare; 4, State Industrial School on Valentine's Type; 5, Maxwell & Sons on Florice's Prince.

Junior Yearling Bulls—(13 shown)—1, Carpenter & Ross on Maxwalton Lochinvar; 2, Maxwell-Miller on Broadhooks Stamp; 3, Gawthrop on Prince Charming; 4, Saunders & Sons on Cumberland's Defender; 5, Maxwell-Miller on Modest King; 6, Gleason & Blazer on Count Robert; 7, Hultine & Sons on Augustine; 8, Maxwell & Sons on Columbine Marengo; 9, Saunders & Sons on Sultan's Goods 2d; 10, Lamp on Uneeda Perfection; 11, Lamp on Pacemaker; 12, Cornforth on Golden Choice.

Senior Bull Calf—(13 shown)—1, Allen Cattle Co. on Divide Supreme; 2, Allen Cattle Co. on Florist; 3, D. Warnock & Sons on Gold Sultan; 4, Saunders & Sons on Type's Model 15th; 5, Shallenberger on Ashbourne Style; 6, Allen Cattle Co. on Divide Knight; 7, Allen Cattle Co. on Divide Conqueror; 8, Andrews on Golden Dale; 9, Warnock & Sons on Advocate Abovne; 10, Multhaup Bros. on Village Duke; 11, Gross on Pat; 12, Woodmansee on Royal Broadhooks.

Junior Bull Calf—(17 shown)—1, Carpenter & Ross on Maxwalton Ladas; 2, Hauf on Roan Archer; 3, Cornforth on Rothe's Sultan 2d; 4, Warnock & Sons on Doune Supreme; 5, Maxwell-Miller on Max-Mill Marmion; 6, Scofield on Lackawana Archer; 7, Shallenberger on Ashbourne Advance; 8, Maxwell-Miller on Max-Mill Parson; 9, Carnahan & Sons on Kiowa Ringmaster; 10, Warnock & Sons on Supreme Archer; 11, Gawthrop on Lime Light; 12, Cornforth on Rothe's Goods.

Aged Cow with Calf at Side—1, Carpenter & Ross on Imp. Lady Dorothy; 2, Colorado Agricultural College on Velvet Countess; 3, Hultine & Sons on Gloster Prince 41st; 4, Scofield on Marigold Bud; 5, Allen Cattle Co. on Divide Favorite; 6, Multhaup Bros. on Claret Surprise.

Aged Cows—(6 shown)—1, Maxwell-Miller on Cloverleaf Lovely; 2, Carpenter & Ross on Miss Snowbird Sultan; 3, Hauf on Monarch's Lady; 4, Colorado Agricultural College on Royal Rose; 5, Multhaup Bros. on Jealousy's Hope; 6, State Industrial School on Tiny Valentine.

Two-year-old Cows—(7 shown)—1, Maxwell-Miller on Max-Mill Myrtle; 2, Scofield on Lackawana Violet 2d; 3, Carpenter & Ross on Maxwalton Mina 20th; 4, Gleason & Blazer on Buttercup 6th; 5, Colorado Agricultural College on Lothian Countess; 6, Hultine & Sons on Select Fern 2d; 7, State Industrial School on Young Mary Valentine.

Senior Yearling Heifers—(8 shown)—1, Shallenberger on Supremacy; 2, Maxwell-Miller on Max-Mill Susan; 3, Scofield on Lackawana Blossom; 4, Allen Cattle Co. on Divide Iris; 5, Carpenter & Ross on Maxwalton Dorothy; 6, Allen Cattle Co. on Divide Sultana; 7, Colorado Agricultural College on Royal Violet; 8, State Industrial School on Mary White.

Junior Yearling Heifers—(10 shown)—1, Shallenberger on Maud 86th; 2, Shallenberger on Beautiful Maid; 3, Maxwell-Miller Cattle Co. on Max-Mill Mina; 4, Allen Cattle Co. on Divide Missie; 5, Hauf on Orange Bud; 6, Hauf on Mountain Marigold; 7, Lamp & Hultine on Choice Foxglove; 8, Carpenter & Ross on Maxwalton Dorothy; 9, Gross on Lady Bird; 10, Multhaup Bros. on Jealousy's Hopeful.

Senior Heifer Calf—(13 shown)—1, Maxwell-Miller on Max-Mill Victoria; 2, Allen Cattle Co. on Divide Maid 2d; 3, Shallenberger on Siren; 4, Carpenter & Ross on Maxwalton Mysie; 5, Colorado Agricultural College on Velvet Douglass; 6, Carpenter & Ross on Maxwalton Missie 13th; 7, Hultine & Sons on Seafoam; 8, Warnock & Sons on Model Augusta 7th; 9, Maxwell & Sons on Lady National; 10, Multhaup Bros. on Orange Blossom 9th; 11, Gawthrop on Lovely Lady; 12, State Industrial School on Mary Ruby.

Junior Heifer Calf—(23 shown)—1, Scofield on Lackawana Mary 3d; 2, Warnock & Sons on Rosemary Bess 2d; 3, Shallenberger on Meadow Blossom; 4, Colorado Agricultural College on Douglas Rose; 5, Gleason & Blazer on Lady Duchess; 6, Maxwell-Miller on Max-Mill Secret; 7, Allen Cattle Co. on Divide Gladiolus; 8, Maxwell-Miller on Max-Mill Acorn; 9, Warnock & Sons on Windsoria Belle; 10, Hultine & Sons on Gloster Princess 43d; 11, Cornforth on Anna Rosedale; 12, Shallenberger on Gay Lass; 13, Colorado Agricultural College on Model Violet; 14, Hauf on Lady Hope.

Senior and Grand Champion Bull—Carpenter & Ross on Maxwalton Monarch.

Junior Champion Bull—Carpenter & Ross on Maxwalton Ladas.

Reserve Grand Champion Bull—Warnock & Sons on Supreme Model.

Senior Grand Champion Cow—Carpenter & Ross on Imp. Lady Dorothy.

Junior and Reserve Grand Champion Heifer—Shallenberger on Supremacy.

Aged Herd—(5 shown)—1, Maxwell-Miller Cattle Co.; 2, Carpenter & Ross; 3, Frank Scofield; 4, Colorado Agricultural College; 5, Albert Hultine & Sons.

Young Herd—(4 shown)—1, Maxwell-Miller Cattle Co.; 2, Allen Cattle Co.; 3, A. C. Shallenberger; 4, Carpenter & Ross.

Calf Herd—(10 shown)—1, Maxwell-Miller Cattle Co.; 2, The Allen Cattle Co.; 3, D. Warnock & Sons; 4, Carpenter & Ross; 5, A. C. Shallenberger; 6, Frank Scofield; 7, Colorado Agricultural College; 8, Gleason & Blazer; 9, Cornforth Live Stock Co.

Get of Sire—(11 shown)—1, Carpenter & Ross; 2, Maxwell-Miller Cattle Co.; 3, Carpenter & Ross; 4, Allen Cattle Co.; 5, Frank Scofield; 6, A. C. Shallenberger; 7, Maxwell-Miller Cattle Co.; 8, Colorado Agricultural College; 9, Albert Hultine & Sons; 10, Gleason & Blazer.

Produce of Dam—(9 shown)—1, Carpenter & Ross; 2, A. C. Shallenberger; 3, Allen Cattle Co.; 4, Carpenter & Ross; 5, Colorado Agricultural College; 6, Gleason & Blazer; 7, C. G. Gawthrop; 8, Colorado Agricultural College.

Champion Bull Calf—Hauf, on Roan Archer.

Reserve Champion Bull Calf—Allen Cattle Co. on Divide Supreme.

WESTERN SHORTHORN FUTURITY.

Senior Bull Calves—(6 shown)—1, Allen Cattle Co. on Divide Supreme; 2, Allen Cattle Co. on Florist; 3, Allen Cattle Co. on Divide Conqueror; 4, Warnock & Sons on Advocate's Abovne; 5, Multhaup Bros. on Village Duke; 6, Gross on Pat.

Junior Bull Calves—(19 shown)—1, Hauf on Roan Archer; 2, Warnock & Sons on Doune Supreme; 3, Maxwell-Miller on Max-Mill Parsons; 4, Maxwell-Miller on Max-Mill Marion; 5, Carnahan & Sons on Kiowa Ringmaster; 6, Warnock & Sons on Supreme Archer; 7, Gawthrop on Violet's Pride; 8, Cornforth on Rothe's Goods; 9, Gleason & Blazer on Red Robert; 10, Gawthrop on Lime Light.

Senior Heifer Calves—(6 shown)—1, Maxwell-Miller on Max-Mill Victoria; 2, Allen Cattle Co. on Divide Maid 2d; 3, Warnock & Sons on Model Augusta 7th; 4, Maxwell & Sons on Lady National; 5, Multhaup Bros. on Orange Blossom 9th; 6, Gawthrop on Lovely Lady.

Junior Heifer Calves—(10 shown)—1, Warnock & Sons on Rosemary Bess; 2, Gleason & Blazer on Lady Duchess; 3, Maxwell-Miller on Max-Mill Acorn 2d; 4, Allen Cattle Co. on Divide Gladiolus; 5, Maxwell-Miller on Max-Mill Secret; 6, Warnock & Sons on Windsoria Belle; 7, Cornforth on Anna Rosedale; 8, Hauf on Lady Hope; 9, Gleason & Blazer on Robert's Pearl; 10, Carnahan & Sons on Adeline 3d.

Champion Heifer Calf—Maxwell-Miller on Max-Mill Victoria.

Reserve Champion Heifer Calf—Warnock & Sons on Rosemary Bess 2d.

ABERDEEN-ANGUS.

Judge—J. D. Blackwell, Fayette, Mo.

Exhibitors—Carpenter & Ross, Mansfield, O.; Ludwig Dietz, Arriba; R. R. Lucore & Sons, Arriba; J. W. McClung & Sons, Indianola, Neb.; J. C. Simpson, Muskogee, Okla.; Wycoff Bros., Luray, Kan.

Aged Bulls—(2 shown)—1, Carpenter & Ross on Prince Idyll of Maisemore; 2, Lucore & Sons on Everloise's Cap.

Two-year-old Bulls—(1 shown)—1, Lucore & Sons on Knollwood Embosser.

Senior Yearling Bulls—No entries.

Junior Yearling Bulls—(1 shown)—1, Lucore & Sons on Knollwood Embosser 2d.

Senior Bull Calves—(1 shown)—1, McClung & Sons on Edifice of Sundance.

Junior Bull Calves—(1 shown)—1, Lucore & Sons on Knollwood Buhel.

Aged Cows—(4 shown)—1, Carpenter & Ross on Ericka C 5th; 2, Dietz on Knollwood Hulda; 3, Lucore & Sons on Knollwood Lass; 4, Lucore & Sons on Knollwood Erica 3rd.

Two-year-old Cows—(4 shown)—1, Carpenter & Ross on Enigma of Glyn Mawr; 2, McClung & Son on Blackbird of Sundance; 3, Lucore & Sons on Knollwood Etna; 4, Dietz on Montfort Hulda.

Senior Yearling Heifers—(2 shown)—1, Carpenter & Ross on Blackbird 267th; 2, Lucore & Sons on Knollwood Laura.

Junior Heifer Calves—(1 shown)—Lucore & Sons on Knollwood Key 4th.

Senior Heifer Calves—(2 shown)—1, Carpenter & Ross on Pride Judith; 2, Lucore & Sons on Knollwood Justine's Last.

Senior and Grand Champion Bull—Carpenter & Ross on Prince Idyll of Maisemore.

Junior and Reserve Grand Champion Bull—McClung & Son on Edifice of Sundance.

Senior and Grand Champion Cow—Carpenter & Ross on Erica C 5th.

Junior and Reserve Grand Champion Heifer—Carpenter & Ross on Pride Judith.

Aged Herds—(2 shown)—1, Carpenter & Ross; 2, Lucore & Sons.

Young Herds—(1 shown)—1, R. R. Lucore & Sons.

Calf Herds—(1 shown)—1, R. R. Lucore & Sons.

Get of Sire—No entries.

Produce of Dam—(2 shown)—1 and 2, R. R. Lucore & Sons.

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GOODYEAR

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CARLOT FEEDER CATTLE.

Judges—Dan D. Casement, Manhattan, Kan.; H. K. Forsythe, Scottsbluff, Neb.; Walter Yost, Kansas City, Mo.

Two-year-old Feeder Cattle—1, W. C. Harris, Sterling (Herefords); 2, J. E. Braiden, La Jara (Herefords); 3, J. E. Braiden, La Jara (Herefords); 4, Fred L. Weiss, Elizabeth (Shorthorns); 5, Samuel Fielden & Son, La Veta (Herefords).

Yearling Feeder Cattle—1, Russell Bros., La Jara (Herefords); 2, J. E. Braiden, La Jara (Herefords); 3, Fred L. Weiss, Elizabeth (Shorthorns); 4, Fred L. Weiss, Elizabeth (Shorthorns); 5, Wm. Lambert, Sedalia (Herefords).

Feeder Calves—1, Fred L. Weiss, Elizabeth (Shorthorns); 2, Phillips Highland Ranch, Littleton (Herefords); 3, R. P. Lamont, Jr., Larkspur (Herefords); 4, George F. Crowe, Denver (Herefords); 5, Fred L. Weiss, Elizabeth (Shorthorns).

Champion Carload—Fred L. Weiss, Elizabeth (Shorthorns).

Reserve Champion Carload—Russell Brothers, La Jara (Herefords).

AMERICAN SHORTHORN BREEDERS CARLOT SPECIALS.

Two-year-old Feeders—1, Fred L. Weiss, Elizabeth; 2, Al A. Neale, Montrose; 3, Bon Manhart, Sedalia; 4, Henry Singer, Sedalia; 5, C. G. King, Loveland.

Yearling Feeders—1, Fred L. Weiss, Elizabeth; 2, Fred L. Weiss, Elizabeth; 3, Henry Singer, Sedalia; 4, George E. Shoup, Salmon, Idaho; 5, C. G. King, Loveland.

Feeder Calves—1, Fred L. Weiss, Elizabeth; 2, Fred L. Weiss, Elizabeth; 3, John J. Pyeatt, Lemhi, Idaho; 4, Geo. E. Shoup, Salmon, Idaho.

Association Special Champion Load—Fred L. Weiss, Elizabeth (Shorthorn Calves).

Association Special Grand Champion Load—Fred L. Weiss, Elizabeth (Shorthorn Calves).

AMERICAN HEREFORD CARLOT SPECIALS.

Two-year-old Feeders—1, C. W. Harris, Sterling; 2, J. E. Braiden, La Jara; 3, J. E. Braiden, La Jara; 4, S. Fielden & Son, La Veta; 5, W. C. Harris, Sterling.

Yearling Feeders—1, Russell Bros., La Jara; 2, J. E. Braiden, La Jara; 3, Wm. Lambert, Sedalia; 4, A. E. Dwindell, Walden; 5, Lavender & Wheeler, Telluride.

Feeder Calves—1, Phillips Highland Ranch, Littleton; 2, R. P. Lamont, Jr., Larkspur; 3, Geo. F. Crow, Denver; 4, J. W. Shown & Son, Monte Vista; 5, O. W. Shellabarger, Moffat.

CARLOT BREEDING CATTLE.

Judge—J. V. Harrison, Indianola, Neb.

Carload Registered Yearling Heifers—1, John E. Painter & Sons, Roggen (Herefords); 2, Elmer E. & N. T. Youngs, Lexington, Neb. (Herefords); 3, Johnson Bros., Eagle (Herefords); 4, Andrew Christensen, Eagle (Herefords); 5, H. G. Barr, Stratton, Neb. (Herefords).

Carload Heifer Calves—1, John E. Painter & Sons, Roggen (Herefords).

Carload Registered Yearling Bulls—1, Elmer E. and N. T. Youngs, Lexington, Neb. (Herefords); 2, John E. Painter & Sons, Roggen (Herefords); 3, L. G. Davis, Saratoga, Wyo. (Herefords); 4, C. G. Cochran, Hays, Kan. (Herefords); 5, Moses Bros. & Clayton, Great Bend, Kan. (Herefords).

Carload Bull Calves—(1 shown)—1, J. E. Painter & Sons, Roggen (Herefords).

Grand Champion Carload Registered Heifers—John E. Painter & Sons, Roggen.

Reserve Champion Carload Registered Heifers—John E. Painter & Sons, Roggen.

Grand Champion Carload Registered Bulls—Elmer E. & N. T. Youngs, Lexington, Neb.

Reserve Champion Carload Breeding Bulls—John E. Painter & Sons, Roggen.

Free—A Valuable Cow Book.

In the Dairy and Hog Department, page 21, of this issue, is described Van Pelt's Cow Demonstrator Book. This valuable book will be sent free on request to all farmer and dairymen readers of Western Farm Life. Look for the display advertisement. Fill out the coupon and mail at once. It is a book you should have.

The Dairy Show.

In the Holstein division the grand championship bull award went to the Modern Woodmen Sanatorium herd of Colorado Springs on King Pontiac Parthenia, who was junior champion at the National Dairy Show in 1921. Colantha Chief of the E. J. Lindquist herd, Denver, was awarded the senior championship and provided strong competition for the Woodmen sire in the final judgment. Colorado Agricultural College captured the female grand championship with Korndyke Sarcastic Julie 2nd. The Holstein awards follow:

HOLSTEIN FRIESIAN.

Judge—H. H. Kildee, Ames, Iowa.

Exhibitors—American Beet Sugar Co., Rocky Ford; H. W. Bown, Fort Logan; James Cameron, Barr; Colorado Agricultural College, Fort Collins; Ray E. Cannon, Advada; Colorado State Home, Denver; L. C. Donley, Morrison; Donley & Hansen, Morrison; Mrs. R. G. Douglas, Rush P. O.; W. G. Foster, Englewood; Lee Gaiser, Denver; James Gibson, Morrison; Gray & Leonard, Denver; Hall Bros., Denver; Caspar Hofmann, Denver; J. J. Kalberer, Broomfield; John Kramer, Brighton; E. J. Lindquist, Denver; Modern Woodmen Sanatorium, Woodmen; O. W. Murphy, Arvada; D. R. Palmquist, Denver; Spencer Penrose, Colorado Springs; The Pickering Farm, Belton, Mo.; Range View Stock Farm, Henderson; John A. Rymer, Edgewater; Emma Schneider, Denver; Ben F. Simpson, Denver; Union College, College View, Neb.; Whowell & Polley, Johnstown; Willow Springs Farm, Morrison.

Aged Bulls—(2 shown)—1, Lindquist on Colantha Chief; 2, Penrose on Columbine [illegible] Changeling.

Two-year-old Bulls—(4 shown)—1, Willow Springs Farm on Maryland Tetje King Glen; 2, Union College on Post Entry; 3, Donley & Hansen on Loupview Corona King.

Senior Yearling Bulls—(7 shown)—Modern Woodmen Sanatorium on King Pontiac Parthenia.

Champion; 2, Hall Bros. on Western Colantha Sir Top; 3, Kramer on Broadway Bueke Combination.

Junior Yearling Bulls—(10 shown)—1, Gibson on Prince Veeman Korndyke Clare; 2, Lindquist on Lindale Duchess De Kol Lad: 3, Union College on Post Entry.

Senior Bull Calves—(14 shown)—1, Penrose on Columbine Piebe Changeling 3d; 2, Union College on Post Entry; 3, Modern Woodmen Sanatorium on Colantha Beets De Kol Johanna.

Junior Bull Calves—(18 shown)—1, Donley & Hansen on Ascalon Changeling; 2, Simpson on Windsor Johanna De Kol Prince; 3, Penrose on Columbine Ormsby Fobes.

Aged Cows—(14 shown)—1, Colorado Agricultural College on Korndyke Sarcastic Julie 2d; 2, Whowell & Polley on South Onondago Favorite; 3, Modern Woodmen Sanatorium on Parthena Nudene.

Three-year-old Cows—(8 shown)—1, Modern Woodmen Sanatorium on Lady Lois Korndyke; 2, Colorado Agricultural College on Barbara Duchess Clyde 3d; 3, Kalberer on Post Entry.

Two-year-old Cows—(13 shown)—1, Penrose on Columbine Rue Changeling; 2, Gaiser on Lady Beauty Segis Canary; 2, Modern Woodmen Sanatorium on Kansas Star Jewel.

Senior Yearling Heifers—(7 shown)—1, Penrose on Kansas Star Madison Jewel: 2, Union College on Post Entry; 3, Donley & Hansen on Avoca Lodge Alcartra Pontiac.

Junior Yearling Heifers—(10 shown)—1, Colorado State Home on Alcartra Colorado Ormsby Jane; 2, Modern Woodmen Sanatorium on Inka Belle Korndyke Netherland; 3, Union College on Post Entry.

Senior Heifer Calves—(18 shown)—1, Penrose on Columbine Dossie Queen; 2, Lindquist on Princess Johanna Hope 2d; 3, Simpson on Colette Rag Apple Johanna.

Junior Heifer Calves—(33 shown)—1, Willow Springs Farm on Mountain Maid Julie Combination; 2, Colorado State Home on Lady Colantha Luecke Ormsby; 3, Modern Woodmen Sanatorium on Woodcraft Venus Pietertie Pontiac.

Senior Champion Bull—Lindquist on Colantha Chief.

Junior and Grand Champion Bull—Modern Woodmen Sanatorium on King Pontiac Parthenia Champion.

Reserve Grand Champion Bull—Gibson on Prince Veeman Korndyke Clare.

Senior and Grand Champion Cow—Colorado Agricultural College on Korndyke Sarcastic Julie 2nd.

Junior and Reserve Grand Champion Heifer—Penrose on Columbine Bessie Queen.

Aged Herd—(4 shown)—1, Spencer Penrose; 2, Willow Springs Farm; 3, Union College.

Young Herd—(4 shown)—1, Spencer Penrose; 2, Union College; 3, Colorado State Home.

Calf Herd—(6 shown)—1, Spencer Penrose; 2, Modern Woodmen Sanatorium: 3, Colorado State Home.

Get of Sire—(12 shown)—1, Spencer Penrose; 2, Cruse & Son; 3, Colorado State Home.

Produce of Dam—(9 shown)—1, Hall Bros.; 2, Spencer Penrose; 3, Union College.

MILKING SHORTHORNS.

Judge—H. H. Kildee, Ames, Iowa.

Exhibitors—J. B. Benedict, Littleton; Peter Benedict, Littleton; Bonvue Farms Co., Denver; C. G. Gawthrop; Mancos; Pine Valley D. & F. Co., Colorado Springs; State Industrial School, Golden; Tegtmeyer & Sons, Denver.

Aged Bulls—(3 shown)—1, Pine Valley Dairy & Farms Co. on Imp. Master Harry; 2, Benedict on Royal Glenside; 3, State Industrial School on White Adelbert.

Two-year-old Bulls—(1 shown)—1, Bonvue Farms Co. on Kirklevington King.

Yearling Bulls—(5 shown)—1, Benedict on Kirklevington Royal; 2, Pine Valley Dairy & Farms Co. on Pine Valley Synonym; 3, Tegtmeyer & Son on Wonderview Superb; 4, State Industrial School; 5, Pine Valley Dairy & Farms Co. on Pine Valley Bedford.

Bulls Under 1 Year Old—(9 shown)—1, Benedict on Wyldemere Premier; 2, Bonvue Farms Co. on Bonvue Ellery; 3, Pine Valley Dairy & Farms Co. on Pine Valley Max; 4, Tegtmeyer on Sir Walter Claywood; 5, Bonvue Farms Co. on Bonvue Oxford.

Aged Cows—(5 shown)—1, Tegtmeyer & Sons on Rosy Claywood; 2, Tegtmeyer & Sons on Claywood Adelaide; 3, Tegtmeyer & Sons on Claywood's Prize; 4, Tegtmeyer & Sons on Golden Medora 7th; 5, Pine Valley Dairy & Farms Co. on Imperial Duchess.

Three-year-old Cows—(3 shown)—1, Tegtmeyer & Sons on Fairy Face; 2, Bonvue Farms Co. on Cressida Queen; 3, Pine Valley Dairy & Farms Co. on Pine Valley Hetty.

Two-year-old Heifers—(5 shown)—1, Bonvue Farms Co. on Lily White; 2, Peter Noel Benedict on Wyldemere Louise; 3, Pine Valley Dairy & Farms Co. on Pine Valley Maid; 4, J. B. Benedict on Wyldemere Daisy.

Senior Yearling Heifers—(6 shown)—1, Bonvue Farms Co. on Bonvue English Daisy; 2, Pine Valley Dairy & Farms Co. on Pine Valley Kate; 3, State Industrial School on Vera's Lady Wood; 4, J. B. Benedict on Claywood Byrd; 5, State Industrial School on Golden Pomona Clay.

Junior Yearling Heifers—(6 shown)—1, Pine Valley Dairy & Farms Co. on Pine Valley Beauty; 2, Benedict on Marion Bates; 3, Benedict on Barrington Bell; 4, State Industrial School on Jesse Clay; 5, Tegtmeyer on Abes Leaf.

Senior Heifer Calves—(12 shown)—1, Benedict on Claywood Bates; 2, Gawthrop on Lovely Lady; 3, Pine Valley Dairy & Farms Co. on Pine Valley Anne; 4, Bonvue Farms Co. on Bonvue Velvet; 5, Pine Valley Dairy & Farms Co. on Pine Valley Helen.

Junior Heifer Calves—(7 shown)—1, Bonvue Farms Co. on Post Entry; 2, Pine Valley Dairy & Farms Co. on Pine Valley Isabella; 3, Pine Valley Dairy & Farms Co. on Pine Valley Minette; 4, Benedict on Wyldemere Princess 2d; 5, Tegtmeyer on Phyllis Glenside.

Senior and Grand Champion Bull—Bonvue Farms Co. on Kirklevington King.

Junior and Reserve Grand Champion Bull—Benedict on Wyldemere Premier.

Senior and Reserve Grand Champion Cow—Tegtmeyer on Rosy Claywood.

Junior and Grand Champion Heifer—Benedict on Claywood Bates.

Aged Herd—(2 shown)—1, W. C. Tegtmeyer & Co.; 2, Bonvue Farms Co.

Young Herd—(3 shown)—1, J. B. Benedict; 2, Pine Valley Dairy & Farms Co.; 3, State Industrial School.

Calf Herd—(4 shown)—1, J. B. Benedict; 2, Bonvue Farms Co.; 3, Pine Valley Dairy & Farms Co.; 4, State Industrial School.

Get of Sire—(4 shown)—1, J. B. Benedict; 2, Pine Valley Dairy & Farms Co.; 3, Bonvue Farms Co.; 4, State Industrial School.

Produce of Dam—(4 shown)—1, J. B. Benedict; 2, Pine Valley Dairy & Farms Co.; 3, State Industrial School.

American Shorthorn Breeders' Association Specials—(4 shown)—1, Tegtmeyer on Rosy Claywood; 2, Pine Valley on Imperial Duchess; 3, Bonvue Farms Co. on Abigale.

JERSEY.

Judge—H. H. Kildee, Ames, Iowa.

Exhibitors—Colorado Agricultural College, Fort Collins; A. M. McClenahan, Greeley.

Aged Bulls—No entries.

Two-year-old Bulls—(1 shown)—1, McClenahan on Majesty's Defiant Gount.

Senior Yearling Bulls—No entries.

Junior Yearling Bulls—(1 shown)—1, McClenahan on Bosnian's Shy Duke.

Senior Bull Calves—(1 shown)—1, McClenahan on Jubilee's Majesty Fox.

Junior Bull Calves—(1 shown)—1, Colorado Agricultural College.

Aged Cows—(4 shown)—1, McClenahan on Helen DeKay; 2, McClenahan on Countess Lad's Indian Maid; 3, Colorado Agricultural College on Leora Neomi.

Three-year-old Cows—No entries.

Two-year-old Heifers—(2 shown)—1, McClenahan on Princely's Sweet Star; 2, Colorado Agricultural College on Fox's May Lily.

Senior Yearling Heifers—No entries.

Junior Yearling Heifers—(4 shown)—1, McClenahan on Helen's Gamboge Princess; 2, Colorado Agricultural College on Irma Fern; 3, McClenahan on Majesty's Feather Lad's Dodo; 4, Colorado Agricultural College on Gamboge Fancy Empress.

Senior Heifer Calves—(4 shown)—1, Colorado Agricultural College on Fox's Gamboge Rosette; 2, McClenahan on Mary Should Do; 3, Colorado Agricultural College.

Junior Heifer Calves—(3 shown)—1, McClenahan on Majesty's Finance Girl; 2, McClenahan on Majesty's Frizzie; 3, Colorado Agricultural College.

Senior and Grand Champion Bull—McClenahan on Majesty's Defiant Count.

Junior and Reserve Grand Champion Bull—McClenahan on Bosnian's Shy Duke.

Senior and Grand Champion Cow—McClenahan on Helen DeKay.

Junior and Reserve Grand Champion Heifer—McClenahan on Helen's Gamboge Princess.

Aged Herd—(1 shown)—A. M. McClenahan.

Young Herd—(2 shown)—1, A. M. McClenahan; 2, Colorado Agricultural College.

Calf Herd—(1 shown)—A. M. McClenahan.

Get of Sire—(2 shown)—1, Colorado Agricultural College; 2, A. M. McClenahan.

Produce of Dam—(2 shown)—1, A. M. McClenahan; 2, Colorado Agricultural College.

GUERNSEY.

Judge—H. H. Kildee, Ames, Iowa.

Exhibitors—E. J. and Clark Bender, Berthoud; Colorado Agricultural College, Fort Collins; H. A. Olmstead, Louviers; H. D. Parker, Greeley.

Aged Bulls—(1 shown)—1, Parker on Lilly's College Prince.

Two-year-old Bulls—No entries.

Senior Yearling Bulls—(1 shown)—1, E. J. & Clark Bender on Daisy's Golden Boy on Overland.

Junior Yearling Bulls—(1 shown)—1, E. J. & Clark Bender.

Senior Bull Calves—(2 shown)—1, Olmstead on May's King of Washakie; 2, Parker on Auburn's Advocate.

Junior Bull Calves—(2 shown)—1, E. J. & Clark Bender on Gloria's Prince; 2, Parker on Don Galore.

Aged Cows—(4 shown)—1, E. J. & Clark Bender on Moss Raider's June; 2, E. J. & Clark Bender; 3, H. D. Parker.

Three-year-old Cows—(3 shown)—1, E. J. & Clark Bender on Minnie of Lake Bluff; 2, E. J. & Clark Bender on Rilma's Rose of Hillside; 3, Parker on Matilda of Creamdale.

Two-year-old Heifers—(3 shown)—1, E. J. & Clark Bender on Valley View's Lenorill; 2, Colorado Agricultural College on Auburn's Fancy; 3, Parker on Creamdale Rilma.

Senior Yearling Heifers—(1 shown)—1, Parker on Evergreen Peggy.

Junior Yearling Heifers—(3 shown)—1, Colorado Agricultural College on Woodland Mary; 2, E. J. & Clark Bender on Valley View's Quoin; 3, Parker on Creamdale Tilda.

Senior Heifer Calves—(5 shown)—1, Colorado Agricultural College on Orlett's Fancy Queen; 2, E. J. & Clark Bender on Valley View's Hope; 3, Parker on Auburn's Victoria.

Junior Heifer Calves—(3 shown)—1, E. J. & Clark Bender on Valley View's Flora; 2, Parker on Blanch Delight; 3, E. J. & Clark Bender on Golden Squire's Flossie.

Senior and Grand Champion Bull—Parker on Lilly's College Prince.

Junior and Reserve Grand Champion Bull—Olmstead on May's King of Washakie.

Senior and Grand Champion Cow—E. J. & Clark Bender on Moss Raider's June.

Junior and Reserve Grand Champion Heifer—Colorado Agricultural College on Orlett's Fancy Queen.

Aged Herd—(1 shown)—H. D. Parker.

Young Herd—(2 shown)—1, E, J, & Clark Bender; 2, H. D. Parker.

Calf Herd—(2 shown)—1, E. J. & Clark Bender; 2, H. D. Parker.

Get of Sire—(1 shown)—1, E, J, & Clark Bender.

Produce of Dam—(3 shown)—1, Colorado Agricultural College; 2 and 3, E. J. & Clark Bender.

Best Advanced Registered Cow—(1 shown)—1, E, J. & Clark Bender.

Farm Bureau Corn Show.

The Colorado State Farm Bureau Grain show, held in connection with the National Western Stock show, and now an established part of the great exposition, brought out quality exhibits of corn, wheat, barley, grain sorghums and grasses, and furnished especially lively and interesting competition in corn, which was the feature of the show. Douglas, Adams, Logan, Elbert, Boulder and Arapahoe counties competed in the county class, Logan winning with a splendid display in which the educational was featured. County Agent J. E. Morrison, who was responsible for the arrangement, has a habit of winning first in county competition at the State fair and he decided to go after the record at the National Western and was, as usual, successful.

Arthur Rossiter, a 15-year-old member of the Boulder County Boys' and Girls' Corn Club, won sweepstakes prize in the open class for the best ten ears of corn grown in Colorado. He has been a club member only two years, but has put in his time to good effect.

County Agent F. D. Yeager of Boulder county won the silver trophy cup offered by Western Farm Life to the county agent making the best twenty-ear exhibit of corn grown in Colorado. There was hot competition among the county agents for this trophy, the entries indicating that corn growing is not confined to any particular section of the state. Six counties competed for this trophy. County Agent Ben King of Montrose was second and the others placed as follows: Raymond Miller, Douglas county, third; W. F. Droge, Otero, fourth; R. P. McCann, Mesa, fifth.

The county displays proved what standardization has done toward crop improvement in Colorado. The varieties which were once almost as numerous as the farms on which corn is grown have been cut down to four leaders and quality has been gradually reaching greater excellence. As stated, Logan was first, with Douglas second, Elbert third, Adams fourth, Boulder fifth, and Arapahoe sixth.

Following are the complete awards in the corn show:

Ten Ears of Yellow Dent, Zone 1—Fred Bowers, Grand Junction, 1st; B. E. Marvin, La Junta, 2d; Geo. R. Mock, Dailey, 3d; S. H. Sonneman, Haxtun, 4th.

Ten Ears White Dent, Zone 1—Warren Worthley, Willard, 1st; W. O. Yankey, LaJunta, 2d; C. P. Gries, Merino, 3d; Carl Greis, Merino, 4th.

Ten Ears Calico Dent, Zone 1—Chas. B. Hotz, Padroni, 1st; M. O. Kimler, Atwood, 2d; A. G. Koester, Padroni, 3d; W. J. Carrington, LaJunta, 4th.

Single Ear, Any Variety, Zone 1—C. P. Greis, Merino, 1st; Warren Worthley, 2d; Fred Gothorpe, 3d; R. R. Rosenberger, 4th.

Ten Ears, Zone 1, Champion—Warren Worthley, Willard.

Grand Champion Single Ear Unreg.—C. P. Greis, Merino.

ZONE 2.

Ten Ears of Yellow Dent—R. H. Miller, Castle Rock, 1st; Geo. Kelley, Strasburg, 2d; C. H. Dixon, Delta, 3d; Noah Allen, Littleton, 4th.

Ten Ears, Any Other Variety—Earnest Newlean, Stock Yards Station, Denver, 1st; O. L. Linch, Littleton, 2d; I. B. Edler, Littleton, 3d.

Ten Ears Flint—John Howell, Montrose, 2d.

Single Ear Any Variety—Geo. Phillips, Montrose, 1st; Merrill Ross, Olathe, 2d; C. H. Dixon, Delta, 3d and 4th.

Champion Ten Ears, Zone 2—R. H. Miller, Castle Rock.

ZONE 3.

Ten Ears Yellow Dent—R. H. Miller, Castle Rock, 1st; W. H. Deming, Kiowa, 2d; G. W. Deming, Kiowa, 3d; W. G. Baryles, Simla, 4th.

Ten Ears White Dent—Geo. Logan, Kiowa, 1st; G. W. Deming, Kiowa, 2d.

Ten Ears, Any Other Variety Dent—Henry Haas, Kiowa, 1st; R. H. Miller, Castle Rock, 2d; G. W. Deming, Kiowa, 3d and 4th.

Ten Ears White Flint—R. H. Miller, Castle Rock, 1st.

Ten Ears Flour Corn—G. W. Deming, 2d.

Single Ear, Any Variety—W. H. Deming, Kiowa, 1st; G. W. Deming, 2d.

Champion Ten Ears—R. H. Miller, Castle Rock.

ZONE 4 (Above 7,000 Feet).

R. H. Miller, Castle Rock, 1st; W. O. Sauder, Center, 2d, 3d and 4th.

Small Grains, Hard Red Winter Wheat—R. K. Davis, Craig, 1st; I. W. Silven, Craig, 2d; E. M. Brown, Fleming, 3d; Elle Knudson, Peetz, 4th.

Marquis—O. L. Davis, Craig, 1st; L. E. Snyder, Craig, 2d; Geo. Hoffman, Iliff, 3d; B. F. O'Brien, Littleton, 4th.

Durum—Jen Jensen, Peetz, 1st; Henry Hawkins, Peetz, 2d.

Champion Peck—O. L. Davis, Craig.

Swedish Type Oats—R. A. Chisholm, Del Norte, 1st; Fred Gothorpe, Proctor, 2d; J. E. Oyler, Sterling, 3d; Cornforth Livestock Company, 4th.

Kherson Oats—Geo. Merrick, Strasburg, 1st; Geo. Hoffman, Iliff, 2d.

Champion Peck Oats—R. A. Chisholm, Del Norte.

Peck Hulless Barley—A. P. Morgan, Sterling, 1st; J. R. Bruce, Calhan, 2nd.

Peck Hulled Barley—Fred Gothorpe, Proctor, 1st; Geo. Hoffman, Iliff, 2d; Henry Hawkins, Peetz, 3d; S. Black, Littleton, 4th.

Winter Rye—H. E. Butler, Craig, 1st; G. W. Clark, Kiowa, 2d.

Spring Rye—G. W. Deming, Kiowa, 1st; Geo. Logan, Kiowa, 2d.

Emmer, Any Variety—John August, Sterling, 1st; A. P. Morgan, Sterling, 2d; Henry Haas, Kiowa, 3d.

Sorghum—John Daugaard, Peetz, 1st; George Tompkins, Sterling, 2d.

Ten Heads Kafir—H. E. Morris, Atwood, 1st and 2d.

Ten Heads Feterita—Geo. Tompkins, Sterling, 1st; W. A. Kirkpatrick, 2d.

Ten Heads Milo—E. R. Morris, Fleming, 1st; J. A. August, Sterling, 2d; J. G. Morrison, Fleming, 3d; A. P. Morgan, Sterling, 4th.

Three-pound Bundle Broom Corn—H. T. Barnett, Brighton, 1st.

Registered Grain—Peck Kanred—Walter Spencer, Craig, 1st; Seymour Burton, Craig, 2d; M. T. Chamberlain, Craig, 3d; H. E. Butler, Craig, 4th.

Red Bobs—No award, 1st; C. W. Lauer, Broomfield, 2nd; O. C. Harris, Longmont, 3d.

Wheeler's Kitchener—O. W. Lauer, Broomfield, 1st.

Champion Peck Wheat—O. L. Davis, Craig, on Marquis.

REGISTERED SEED CLASSES.

Zone 2, 5,000—6,000 Feet Altitude:

Ten Ears Minnesota No. 13—Arthur Rossiter, Broomfield, 1st; Sanford Buster, Jr., Lyons, 2d; Sanford Buster, Sr., Lyons, 3d; Eugene Crosson, Hygiene, 4th.

Ten Ears Reid's Y. D.—W. T. Smith, Longmont, 1st.

Ten Ears, Any Other Variety—J. E. Manchester, Boulder, 1st; Sanford Buster, Sr., Lyons, 2d; no award on 3d; O. L. Lynch, Littleton, 4th.

Best Single Ear Registered—T. E. Manchester, Boulder, 1st; W. T. Smith, Longmont, 2d; H. G. Tiffany, Stock Yards Station, Denver, 3d; O. L. Lynch, Littleton, Colo., 4th.

Champion Ten Ears, Zone 2—On Ten Ears No. 13—Arthur Rossiter, Broomfield, Colo.

ABOVE 6,000 FT. ALTITUDE—Zone 3.

Ten Ears Minn. No. 13 Registered—R. H. Miller, 1st; Geo. Kimble, Simla, 2d.

Ten Ears Any Other Variety—I. H. Haycock, Ramah, 4th.

Champion Ten Ears Registered, Zone 3—R. H. Miller, Castle Rock.

Grand Champion Ten Ears Registered—Arthur Rossiter, Broomfield, Colo.

Grand Champion Single Ear—T. E. Manchester, Boulder, Colo.

COUNTY AGENT SPECIAL.

F. D. Yeager, Longmont, 1st; Ben King, Montrose, 2d; R. H. Miller, Castle Rock, 3d; W. F. Droge, Rocky Ford, 4th.

COUNTY EDUCATIONAL EXHIBIT.

Logan County—J. E. Morrison, County Agent, 1st.

Douglas County—R. H. Miller, County Agent, 2d.

Elbert County—A. H. Aicher, County Agent, 3d.

Adams County—J. T. Robertson, County Agent, 4th.

National Western Hog Show.

E. J. MAYNARD.

Entries in the swine division of the National Western Stock Show this year showed more quality right straight through than was evident last year. Fat barrows were judged by F. W. Bell, head of the swine department of Kansas State Agricultural College. This is primarily a market type and is supposed to represent the packer's ideal with enough bone and breed type included to keep up the producer's standard.

The grand champion barrow, a Chester White from the University of Nebraska, was extremely typey. The Colorado Agricultural College won reserve grand champion on a very smooth, typey, well finished barrow, probably the best balanced hog in the contest.

R. G. Maxwell of Fort Collins won several ribbons on barrows, well finished, but more on the low, blocky order, with well developed hams, but not carrying quite the even balance throughout of the champions.

The Duroc Jersey show included the usual breeders from Colorado, with the Abts Stock Farm from Columbus, Neb., looming up as the dark horse of the show.

J. W. Brauer won in the aged boar class on a son of Chief Sensation. This boar is heavy-boned and smooth, but lacked stretch when shown in the championship class. The Blue Ribbon Livestock Co. won second on a son of Jack's Orion King 2nd, Longview's $10,000 boar. He was a large boar but a trifle coarse.

Colorado Agricultural College took third on Edgemoor Cherry Chief 2nd, the boar that stood grand champion of the show in 1920. He is a good backed, typey boar, but lacked the size necessary to win.

Abts took first in the senior yearling class on his $5,000 boar, The Hit, a son of Greot Orion Sensation, purchased last July. This boar is stretchy, smooth and very deep sided and as a show boar outclassed any of the others seen here this year. Carlson & Waggoner took second. Their low-set boar lacked the type, however, of Brauer's boar, which went third, possibly due to lack of condition when shown.

Only one junior yearling boar was shown, a trifle undersized, typey, but with poor feet, the entry of the Blue Ribbon Livestock Co. However, they were first with a senior boar pig, a good individual with good pasterns showing plenty of height but lacking a little in length.

O. H. Crow & Sons of Rocky Ford took second money on a medium type pig carrying too much flesh.

The Colorado Agricultural College took third on a very smooth bodied boar with long rear pasterns.

The Abts Stock Farm took first and second junior boar pigs, while Ratcliff of the Rangeview Farm took third. The Abts' first money pig and that of Ratcliffe were sons of Great Orion Sensation and several seemed convinced the Rangeview entry could have gone to the championship classes. The first prize pig was of extreme type, very good from nose to hips, but was under-developed in the hindquarters. He finally was sent to junior champion and reserve champion boar.

The second prize boar was of the rainbow, gunbarrel type, extremely long, shallow throughout and with little substance.

The Rangeview entry showed real promise, being smooth and typey but could be faulted a little for poor front pasterns.

Colorado Agricultural College took first on June boar pigs with a fine Chief Sensation boar, smooth shouldered and good footed, not carrying any excess flesh.

C. F. Gauss of Littleton took second and third moneys on two nice pigs of good conformation and with fair stretch, but carrying too much flesh to show their type. With present show ring standard the younger classes must be in good growing condition only.

The Hit was made senior and grand champion Duroc boar, easily outclassing anything else shown.

The Abts boar was made junior champion over the Burke boar, which went to reserve and the Abts entry was then made reserve grand champion.

In the aged sow class Abts won first on a daughter of Great Orion Sensation.

She was a wonderful individual, very typey, smooth and evenly balanced.

Mrs. Laura Richardson of Yuma was given second place on a very heavy-boned, coarse sow lacking in femininity. Although the sow was carrying plenty of weight, she was lower set than the ideal type.

Colorado Agricultural College came third with a well conformed sow extremely smooth with a high loin, but a trifle light-boned.

Abts won first in the senior yearling class, with the Blue Ribbon Stock Farm second, and Carlson & Waggoner third. The Abts entry was typey, but small, and the second prize lacked type. This was the weakest class shown. The Blue Ribbon won first in the junior yearling class on the grand champion sow at the State fair last year. She is a wonderful sow of modern type, but was defeated for senior champion because of bad front feet. A. A. Blach took third in this class with a sow similar in type of the first prize and a very good sow.

Abts took second on very extreme type, but smaller than the first and third entries.

An extremely strong class of senior sow pigs were driven out. Abts with strong type took first and second money. Colorado Agricultural College with plenty of scale took third, while O. H. Crow & Sons took fourth and fifth on the pigs that were his winners at the State fair.

The junior sow pigs represented the types of many herds with many good ones outside the money. Abts came first, as usual. Rangeview took second on one of the winners at the State fair shown by Kingsley. Carlson & Waggoner took third on a well grown entry.

In the June class Colorado Agricultural College took first and second on two individuals which were properly fitted to show size with type.

McEwen took third on an over-fitted gilt showing short and blocky. Breeders make a mistake in crowding too much weight on early.

Abts Stock Farm took senior and grand and junior and grand championships.

Poland China Classes.

In the Poland China classes extreme quality marked the entries. The Colorado Agricultural College, Walkington of Nebraska, McGillvray of Boulder and the Deming Ranch of Oswego, Kan., were the heavy winners.

Walkington won first money on his aged boar. He was big, broad and smooth, with heavy bone, carrying a lot of flesh, but did not have the stretch of the C. A. C. boar. Gordon's Wonder Boy, which came second, showing the results of his long trip to the International, where he placed third in class. He has great stretch, with smooth shoulders, but is steep in the rump. Deming Ranch took third with a small boar lacking in type and rather low and blocky.

Eleck Baldwin showed the largest boar in the ring. Although this boar won heavily as a pig at the Nebraska State fair in 1918, he showed too much coarseness and age to win in present company.

Deming ranch showed the only senior yearling entry, which was heavy-boned, but of medium type.

In the junior yearling class Latchnite, the Deming Ranch entry, won hands down with wonderful stretch and type. This boar is sire of the junior champion boar pig at the National Swine Show last fall. He would be better with a straighter hind leg and pastern. Colorado Agricultural College took second with Liberator's Giant, a very smooth boar and an exceptionally good sire, but a trifle short.

McGillvray took third with a boar that would have made a run for second had he not showed lame.

Deming Ranch took first and second on two extreme type senior boar pigs who showed the results of a long season's campaign. The Agricultural College beat McGillvray and Walkington in the junior class, showing a well balanced individual with plenty of breed, type and vigor.

The College again had an easy top in the June boar class, winning second money also on a late June pig. Broad's methods in fitting these June boars and gilts might be profitably adopted by other breeders in the state. Eleck Baldwin took third in this class with a large well grown pig, though not of extreme type.

Latchnite, the Deming Ranch entry, captured senior and grand champion, while one of Deming's senior pigs was made junior champion, being defeated junior reserve grand champion by Walkington's smooth aged boar. In the aged sow class McGillvray won on his great show sow, Victoria, a wonderfully smooth animal.

Colorado Agricultural College took second on Joe's Smooth Giantess, who was first prize senior yearling at the International, a sow of extreme quality.

Walkington's entry was large but heavy at the shoulder, though not coarse throughout.

C. A. C. took first on senior yearling with a sow showing lots of femininity, with good mammary development and a straight, smooth and deep underline. This sow had the ideal smooth shoulder desired in the breed and went to reserve grand champion.

Walkington and Deming Ranch sows in this class showed a little coarseness.

In the junior yearling class McGillvray won on Max Lady Special, an extremely smooth, heavy-boned sow with plenty of leg and short pasterns. His second entry was smooth, but not as typey as the first. The College took third with the heaviest and largest entry, but she did not have the arched back desired.

Walkington won on a senior sow pig that was rather undersized, with little type. Deming with second and third places had apparent easy top.

The judge called the junior sow pig class the hardest he had been called upon to place, with sixteen entries, all tops. C. A. C. took first, third and fifth places in the get of Liberator's Giant. Walkington took second, and Deming Ranch fourth.

In the June pig class the College as usual won first and second on a typey top pig and a large individual not so typey. McGillvray won third. Colorado Agricultural College won first on aged herd, get of sire and produce of sow on the get of P. A.'s Smooth Joe. This combination has won five firsts, including a first at the International this year.

McGillvray won senior and grand champion on his junior yearling sow, while C. A. C. won reserve and grand on their senior yearling.

Junior champion went to Walkington on their senior pig.

Henry Had Competition.

In the Berkshire classes, C. W. Henry was the heavy winner. His entries throughout showed type and quality. D. S. Davis and Geo. Fuhrman gave him a close race at times, but were unable to secure many ribbons. C. H. Frink of Fort Lupton, J. W. Banker, Brighton, and C. S. Bratt & Sons of Arapahoe, Neb., divided honors in the Hampshire section. Frink, however, was the heavy winner this year. The judge liked the quality, firmness of jowl and smoothness of body and ear in his entries better than the more rugged type shown by Bratt. Breeders can't always feel satisfied with decisions, but when the awards are made by a nationally known breeder and judge they should endeavor to draw some lessons from the placings.

DUROC-JERSEY.

Judge—W. J. Carmichael, Chicago, Ill.

Exhibitors—Abts Stock Farm, Columbus, Neb.; Banning Ranch, Colorado Springs; J. B. Benedict, Littleton; Ambrose A. Blach, Yuma; Blue Ribbon Live Stock Co., Pueblo; H. W. Bown, Fort Logan; J. W. Brauer, Colorado Springs; I. C. Bradley, Fort Collins; Sanford D. Buster, Jr., Lyons; Carlson & Waggoner, Englewood; Colorado Agricultural College, Fort Collins; Clark Farm, Littleton; O. H. Crow & Sons, Rocky Ford; Roy E. Dickson, Calhan; C. F. Gauss, Littleton; A. A. Jones, Denver; E. J. Maynard, Fort Collins; A. M. McClenahan, Greeley; R. C. McEwen, Peckham; Chas. Nelson, Fort Lupton; H. H. Nickerson, Aurora; J. Mortimer Pugh, Fowler; Dan Rawley, Aurora; Range View Stock Farm, Henderson; Rice & Watson, Englewood; Mrs. Laura Richardson, Yuma; Myron Stratton Home, Colorado Springs; F. R. Schraeder, Littleton; Walt L. Smith, Aurora; University of Nebraska, Lincoln.

Aged Boar—(5 shown)—1, J. W. Brauer; 2, Blue Ribbon Live Stock Co.; 3, Colorado Agricultural College; 4, Rice & Watson.

Senior Yearling Boars—(7 shown)—1, Abts Stock Farm; 2, Carlson & Waggoner; 3, J. W. Brauer; 4, A. M. McClenahan.

Junior Yearling Boars—(1 shown)—1, Blue Ribbon Live Stock Co.

Senior Boar Pigs—(4 shown)—1, Blue Ribbon Live Stock Co.; 2, Otis H. Crow; 3, Colorado Agricultural College; 4, J. W. Brauer.

Junior Boar Pigs—(13 shown)—1 and 2, Abts Stock Farm; 3, Range View Stock Farm; 4, Blue Ribbon Live Stock Co.; 5, Roy E. Gibson.

Boar Pigs Born in June, 1921—(9 shown)—1, Colorado Agricultural College; 2 and 3, C. F. Gauss; 4, R. G. McEwen; 5, J. W. Brauer.

Aged Sows—(9 shown)—1, Abts Stock Farm; 2, Miss Laura Richardson; 3, Colorado Agricultural College; 4, Blue Ribbon Live Stock Co.

Senior Yearling Sows—(3 shown)—1, Abts Stock Farm; 2, Blue Ribbon Live Stock Co; 3, Carlson & Waggoner.

Junior Yearling Sows—(11 shown)—1 and 4, Blue Ribbon Live Stock Co.; 2, Abts Stock Farm; 3, Ambrose A. Blach.

Senior Sow Pigs—(12 shown)—1 and 2, Abts Stock Farm; 3, Colorado Agricultural College; 4 and 5, Otis H. Crow.

Junior Sow Pigs—(25 shown)—1, Abts Stock Farm; 2, Range View Stock Farm; 3 and 4, Carlson & Waggoner; 5, Banning Ranch.

Sow Pigs Born in June, 1921—(10 shown)—1 and 2, Colorado Agricultural College; 3 and 4, R. G. McEwen; 5, C. F. Gauss.

Senior and Grand Champion Boar—Abts Stock Farm.

Junior Champion Boar—Abts Stock Farm.

Senior and Grand Champion Sow—Abts Stock Farm.

Junior Champion Sow—Abts Stock Farm.

Aged Herds—(5 shown)—1, Abts Stock Farm; 2, Blue Ribbon Live Stock Co.; 3, Rice, Carlson & Waggoner; 4, J. W. Brauer; 5, Colorado Agricultural College.

Aged Herds Bred by Exhibitor—(3 shown)—1, Blue Ribbon Live Stock Co.; 2, J. W. Brauer; 3, Carlson & Waggoner.

Young Herds—(7 shown)—1, Abts Stock Farm; 2, Blue Ribbon Live Stock Co.; 3, Roy E. Dixon; 4, Otis H. Crow & Sons; 5, Colorado Agricultural College.

Young Herds Bred by Exhibitor—(5 shown)—1, Blue Ribbon Live Stock Co.; 2, Roy E. Dixon; 3, Colorado Agricultural College; 4, Carlson & Waggoner; 5, Colorado Agricultural College.

Get of Sire—(3 shown)—1, Abts Stock Farm; 2, Blue Ribbon Live Stock Co.; 3, Colorado Agricultural College.

Produce of Sow—(3 shown)—1, Blue Ribbon Live Stock Co.; 2, Carlson & Waggoner; 3, Banning Ranch.

POLAND CHINA.

Judge—W. J. Carmichael, Chicago, Ill.

Exhibitors—Eleck Baldwin, Dickens, Neb.; Mark Bliss, Greeley; J. H. Brown, Selden, Kan.; Colorado Agricultural College, Fort Collins; Deming Ranch Co., Oswego, Kan.; Chas. H. Grayum, Greeley; R. E. Hoggsett, Hillrose; C. J. Mather, Longmont; R. G. Maxwell & Sons, Fort Collins; A. D. McGillvray, Boulder; Parsons & Holmes, Denver; L. H. Schmeeckle, New Raymer; H. B. Taylor, Farnam, Neb.; C. E. Tupps, Brighton; University of Nebraska, Lincoln; R. E. Walkington, Bartley, Neb.

Aged Boar—(6 shown)—1, R. E. Walkington; 2, Colorado Agricultural College; 3, Deming Ranch.

Senior Yearling Boar—(1 shown)—1, Deming Ranch.

Junior Yearling Boar—(3 shown)—1, Deming Ranch; 2, Colorado Agricultural College; 3, A. D. McGillvray.

Senior Boar Pig—(5 shown)—1 and 2, Deming Ranch; 3, R. E. Walkington; 4, Edward Foster; 5, Parsons & Holmes.

Junior Boar Pig—(8 shown)—1, Colorado Agricultural College; 2, A. D. McGillvray; 3, R. E. Walkington; 4, A. D. McGillvray; 5, Eleck Baldwin.

Boar Pig Born in June, 1921—(6 shown)—1 and 2, Colorado Agricultural College; 3, Eleck Baldwin.

Aged Sows—(7 shown)—1, A. D. McGillvray; 2, Colorado Agricultural College; 3, R. E. Walkington.

Senior Yearling Sow—(7 shown)—1, Colorado Agricultural College; 2, R. E. Walkington; 3, Deming Ranch.

Junior Yearling Sows—(11 shown)—1 and 2, A. D. McGillvray; 3, Colorado Agricultural College.

Senior Sow Pigs—(9 shown)—1, R. E. Walkington; 2 and 3, Deming Ranch; 4, C. J. Mather; 5, R. E. Walkington.

Junior Sow Pigs—(16 shown)—1, 3 and 5, Colorado Agricultural College; 2, R. E. Walkington; 4, Deming Ranch.

Sow Pigs Born in June, 1921—(8 shown)—1 and 2, Colorado Agricultural College; 3, A. D. McGillvray.

Senior Champion Boar—Deming Ranch.

Junior Champion Boar—Deming Ranch.

Grand Champion Boar—Deming Ranch.

Reserve Grand Champion Boar—R. E. Walkington.

Senior and Grand Champion Sow—A. D. McGillvray.

Junior Champion Sow—R. E. Walkington.

Reserve Grand Champion Sow—Colorado Agricultural College.

Aged Herd—(5 shown)—1, Colorado Agricultural College; 2, A. D. McGillvray; 3, Deming Ranch.

Aged Herd Bred by Exhibitor—(2 shown)—1 and 2, Deming Ranch.

Young Herd—(6 shown)—1, Deming Ranch; 2, Colorado Agricultural College; 3, R. E. Walkington.

Young Herd Bred by Exhibitor—(7 shown)—1, Deming Ranch; 2, Colorado Agricultural College; 3, Deming Ranch.

Get of Sire—(7 shown)—1, Colorado Agricultural College; 2 and 3, Deming Ranch.

Produce of Sow—(5 shown)—1, Colorado Agricultural College; 2 and 3, Deming Ranch.

HAMPSHIRE SWINE.

Judge—Geo. A. Heyl, Washington, Ill.

Exhibitors—C. W. Banker, Brighton; C. S. Bratt & Son, Arapahoe, Neb.; O. J. Brownfield, Cozad, Neb.; Ed Davis, Bartley, Neb.; L. A. English, Greeley; G. H. Frink, Fort Lupton; University of Nebraska, Lincoln.

Aged Boars—(2 shown)—1, G. H. Frink; 2, C. S. Bratt & Son.

Senior Yearling Boars—No entries.

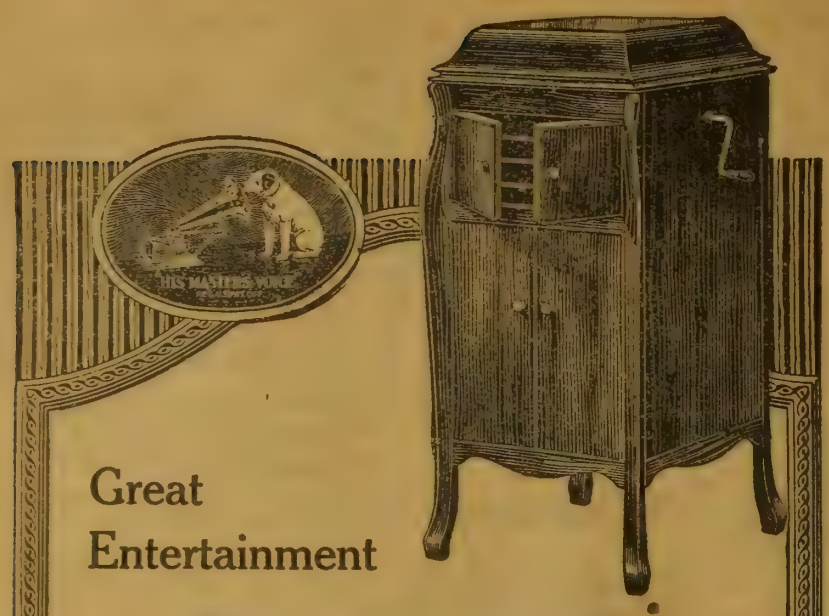
Junior Yearling Boars—(4 shown)—1, G. H. Frink; 2, Ed Davis; 3, C. S. Bratt & Son.

Senior Boar Pigs—No entries.

Junior Boar Pigs—(4 shown)—1, G. W. Banker; 2, G. H. Frink; 3 and 4, C. S. Bratt.

Boar Pigs Born in June, 1921—(4 shown)—1, G. H. Frink; 2 and 3, C. S. Bratt.

(Turn to Page 22.)



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Market Outlook for Farm and Ranch Products.

(Continued from Page 5.)

ican wheat for February and March shipment. Argentine exporters appear to have sold wheat for January shipment anticipating a generous movement from the Argentine interior before the end of the month. Although Argentine growers are selling more freely, receipts at ports thus far have been small so that there is a scarcity of wheat for prompt shipment, making prices delivered to Europe about the same level with United States and Canadian wheat. An advance in ocean freight rates also has had a part in this readjustment. As a result liberal sales of Manitobas have been made to Greece within the last few days, since such wheat can arrive much sooner than the shipments from the Argentine. Additional quantities of Canadian wheat have been bought with funds provided by the Soviet Government for shipment to Russia, and the American Relief also has bought some spring wheat, particularly Durum, for shipment to the same country.

An eastern statistician has calculated that the world's import of wheat in the last six and one-half months has aggregated 40,000,000 bushels, or over 8 per cent more than in the same period a year ago. The increase has been primarily on the part of non-European countries, which are taking about 25 per cent of the total. Several European countries, however, including the United Kingdom, Italy, Germany, Holland, Portugal and Greece, have imported more wheat than they did a year ago.

Visible Wheat Curbs Price.

Although there are numerous factors of strength in the wheat market, the United States and Canada have a combined visible supply and bonded stock in commercial channels totaling 100,000,000 bushels. Mill and elevator holdings are estimated at 25,000,000 bushels more. No anxiety to possess this wheat is in evidence. The situation may not change until the stock has been whittled down much further or until the possibility of a crop scare is nearer at hand.

Winter Corn Run in Progress.

After a lull during the holidays the winter run of corn to primary markets has increased again. Receipts are averaging over 2,000,000 bushels per day. A brisk demand from industries, from eastern consuming sections and purchases for export, including about 7,000,000 bushels for Russian relief, have sustained the market. It is probable that prices will not go much lower, and on the other hand enough producers are willing to sell at prevailing values to prevent a marked upturn in the immediate future.

Oats Scarcity Looms.

The supply of oats on farms on August 1, including the new crop and the carry-over of old oats, was only about equal to the average farm consumption during the past five years. Nevertheless sales from the farm have been about as large as usual. It is possible that corn is being substituted for oats on the farm, otherwise scarcity is probable before the next crop is harvested. At the present time primary receipts are averaging about 1,000,000 bushels per week less than the average rate at which oats have disappeared into consumptive channels since the crop year started. This rate is not making a rapid reduction in the huge visible supply of 667,231,000 bushels. If this stock dwindles rapidly during the spring months a pronounced upturn in values need not occasion surprise.

Cash Grain Markets.

Cash grain prices on Jan. 19 were:

Kansas City—Wheat—No. 2 red, $1.16; No. 3 red, $1.12 to $1.13; No. 1 hard $1.11 to $1.25; No. 2 hard, $1.10 to $1.25; No. 3 hard, $1.07 to $1.23, Corn: No. 2 yellow, 45c; No. 2 mixed and white, 44c. Oats: No. 3 white, 36½c.

Omaha—Corn: No. 2 yellow, 40½c to 40¾c; No. 2 mixed and white, 40½c. Oats: No. 3 white, 33½c; No. 4 white, 33¼c

Moderate Advance in Hay Prices.

Hay prices have advanced in distributing markets since the latter part of December. This advance, combined with lower freight rates, has made values more attractive to producers in surplus sections. Demand has broadened slightly since the first of the year. Total shipments of hay from the surplus districts up to the middle of December were unusually light according to official reports, but owing to the lighter crop the supply remaining to be marketed is not larger than at the corresponding time a year ago.

Kansas City—Prairie upland No. 1, $10@12; No. 2, $8@9.50; No. 3, $6@7.50; alfalfa, choice, $22@24; No. 1, $20@21.50; standard, $17@19.50; No. 2, $14@14.50; No. 3, $11.50@13.50; clover mixed light, $13@14; No. 1, $10.50@12.50; No. 2, $7@10; straw, $6@7.

Heavy Production Breaks Egg Market.

The break in the egg market during the first part of January is said to be the most severe ever known for this season of the year. Prices fell about 40 per cent from the high point of the season, only to rally 10 or 12 cents and then start downward again. Production has been stimulated by cheap feeds and favorable weather combined with relatively high prices for eggs, so that receipts at the leading cities are running more than 25 per cent larger than at the corresponding time last year. An increase in the rate of consumption also is evident, but it is less marked than the increase in production. The course of the market for the rest of the winter depends upon whether prices have declined far enough to offset the increased supply available.

Kansas City—Eggs: Firsts, 31c; seconds, 21c. Live poultry—Ducks, 19c; broilers, 21c; springs, 16c; geese, 16c; heavy hens, 21c; light hens, 18c; roosters, 10c; turkeys, 38c.

Butter Production Exceeds Last Year.

As in the egg market, an increase in butter production has been the dominant factor in the last few weeks. From numerous sections, including some of the range states, reports are coming in of efforts to increase herds of dairy cows and the results are showing up in the form of an increase of about 40 per cent in the make of creamery butter as reported to the trade, and a corresponding increase in the receipts of butter at the four leading cities. In addition, butter consumption has increased relatively less than egg consumption, and large imports of butter from Denmark, New Zealand, Australia and the Argentine have arrived. New Zealand butter has been quoted recently as low as 23½c c. i. f. The duty is 6 cents additional. About 20,000 boxes arrived at San Francisco recently, several cars of which have been sent overland.

Prices for 92 score fresh butter on January 19 were: Chicago, 32½c; New York, 37c; Boston, 36c; Philadelphia, 35c.

Potato Movement Heavy.

The movement of potatoes for the entire country for the season to date is the heaviest on record, exceeding that of last year by nearly 17,000 cars. Colorado ranks fifth at the present time in weekly shipments. The movement has increased since the first of the year, but prices have held fairly well. Sacked Rurals and Pearls, U. S. Grade No. 1, in wagon loads, are bringing mostly $1.30 per 100 pounds at Colorado shipping points.

News of the Farm Bureaus.

(Continued from Page 8.)

was purchased, delivered on board ship at the ports of New Orleans, Baltimore and New York. Since all of the corn must be shipped in 60 days, if the maximum number of lives is to be saved, the committee determined to make purchases on a basis of f. o. b., thus doing away with the necessity for setting up a large buying and shipping organization all over the country. The grain is purchased upon Federal grades and inspection, several scores of bids being received each day in New York. The lowest bids on the quality and amounts desired are accepted. Statements have been made to the effect that the Russians do not or will not eat corn. I am not accurately informed as to the food preferences of the Russians, but I am sure that people starving in the famine areas who are now eating bark from trees, roots, clay, etc., are not going to starve in preference to eating corn. We are shipping the corn unground and will continue to do so, since it will arrive in perfect order during cold weather. Each community in the famine section has an old-fashioned stone mill which can grind the corn very easily and the Russians are anxious to do the work. By shipping the corn whole, the Russians will have the benefit of the corn oil, found mostly in the germ, which would be extracted if the corn were milled in this country and shipped in the usual condition. These starving people need the oil as much as they need the corn."

—o—

300,000 Petition for Peace.—More than a quarter of a million signatures of farmers, members of the A. F. B. F., were presented to the President on January 3. The judgment of President Harding in calling the Conference on Limitation of Armament and his efforts to further the cause of permanent peace were popularly approved. Some 300,000 farmers, in their petitions, endorsed the work for reduction in the number of warships and other warcraft maintained by the leading nations, and prayed for smaller standing armies. The petitions came from almost half of the states in the Union and carried the signatures of national leaders as well as the names of farm people from the most remote sections.

The Rural Household

Questions about home problems promptly answered by letter and through the magazine. Letters from women containing helpful suggestions for improvement of rural life are always welcome. Address all communications to Editor Home Department, Western Farm Life, Denver, Colorado.

Opportunity.

Master of human destinies am I.
Fame, love and fortune on my footsteps wait,
Cities and fields I walk; I penetrate
Deserts and seas remote, and, passing by
Hovel, and mart, and palace, soon or late
I knock unbidden once at every gate!
If sleeping, wake—if feasting, rise before
I turn away. It is the hour of fate,
And they who follow me reach every state
Mortals desire, and conquer every foe
Save death; but those who doubt or hesitate,
Condemned to failure, penury and woe,
Seek me in vain and uselessly implore—
I answer not, and I return no more.
—John J. Ingalls.

Mrs. Rodgers Tells About The Atlanta Convention.

Much interesting information was given to the State Farm Bureau by Mrs. J. M. Rodgers of Wellington, one of the Colorado women who attended the National Farm Bureau meeting at Atlanta in November. Her report included among other things, a digest of the address delivered by Mrs. Izetta Brown, of Kingwood, West Virginia, who was formerly an actress. Mrs. Brown lives on a dairy farm. She gave her address, which was entitled "Whither," in costume, composed of a cloak, a hat, and a pair of glasses. Mrs. Rodgers gives the following account of her talk:

"After telling the trials of old-time farm women is it any wonder that our health broke, that many of us went to the mad house, that city folks began to feel the pity and interest in the down-trodden, faithful toiling farm woman?

"The famous Committee of Seventeen was formed to study grain marketing. We women laid aside our dark glasses. (Here she took off her glasses.) The world was indeed beginning to look brighter and more hopeful. The brilliant Committee of Fifteen was formed to study the livestock problem and their reports and progress and fulfilled promises made us take on a deeper note in our voices. Farmers were beginning actually to stand together and receive the benefits that come from unity.

"The legislative committee reports and results in the agricultural bloc brought our shoulders still higher. The importance and the power of our country's basic industry began to be realized.

"The feet of the Farm Bureau Federation were firmly planted in these economic and financial committees. The head we will call the legislative committee and suddenly, last year the Federation developed its real body, when it opened its heart to the farm women. We felt that the lid (here she removed her hat) was removed, as it were. We were welcomed as partners and we felt a new life beginning to throb through our old selves. Then, for nearly a year we waited thus. The feet, the arms and the head of the Federation were too busy to remember that in a wild moment at Indianapolis it had admitted it had a heart!

"We women were just thinking we must draw, after all, to our old hopeless outlook and were reaching for our dark glasses when the news flashed to us that President Howard had appointed a woman's committee to investigate, advise and nurture this body of the Federation; the heart, in other words, the home. With that news, the last vestige of the down-trodden, forgotten farm woman idea was flung off! (Here she threw aside her cloak.)

"Now, I stand as the happy, hopeful farm woman of the future, waiting to go forward with you in building up the successful, happy, prosperous farm life and home of the future.

"At our meeting yesterday, we went on record as desiring no further publicity as over-burdened and down-trodden. We do not wish to be pitied nor patronized. We want to work for the improvement of farm life conditions, but not particularly as a woman's committee. Home is the place for two, man and woman working together. What benefits one, benefits the other. Have you ever found the farm women working, slaving by themselves, for themselves? No. And we don't want to begin now. We want to work with and for our men folks. We prefer a joint important committee to present a program that will so vitalize our message that no matter how isolated the community, the farm woman there will raise her head, clear her vision and stretch forth her hand to join this determined effort to bring to us whatever we may wish of the labor saving devices and to make the world see how many natural blessings we already enjoy.

"Men, by your successful organization and co-operation, you have made this new co-operative farm woman possible. Farm women are not militant in any sense of the word and those of us who have cast aside the old ideas of isolation, stand waiting for your actual, individual and collective encouragement and financial backing to carry on this human side of the farm bureau work."

Since the conclusion of the Atlanta meeting, Mrs. W. G. Jamison of La Veta, Colo., has been appointed the representative from the far west on the Farm Bureau Federation committee that will work out a program for women's work in that organization.

On Farm Hospitality.

We are interested in "Farm Hospitality" as we have been through the mill, and know whereof we speak. Have been in the west for forty years. During that time we have met people. Some were the tops and some were far from it. A person can generally size them up after they "feed" and many times before. Yet in the early day it was the best one could do. We were on the range and we must say "how" to every one that sought shelter or wanted a meal.

As the range was settled there seemed to be a different kind of "bird" that wanted shelter than there used to be when the country was new. As pastures took the place of range there was no need of "tying up" for the night, as we could make home every time while riding pasture.

Some persons had to be shown that our hospitality was limited and in order to impress it on their mind we have a notice put in a conspicuous place so that those who "run may read," and we find our grub bill has diminished exceedingly since we put it up. It reads as follows: "We have kept open house nigh forty years; there is an end of all things, this is one of them. If you must stay, our prices you must pay. Neighbors welcome."

We have noticed the city chap was the one who thought what the granger furnished the table with cost merely a fraction to supply and the "hayseed" was all right if he only was told what a fine ranch, cattle, and buildings he had, and that would pay the bill. One thing we have noticed, they don't want their "country cousins" visiting their homes in the city, and they steer clear of the granger if about meal time.

Many times hunters would make it a point to call around about dinner, supper, or to tie up for the night on having heard or known us, by us trading in the city and perhaps trading at their store. But we notice they didn't give us the articles. As long as the good wife will wear herself out putting up fine meals and doing chamber work for a certain element, just so long they will play the leech if not told "there is an end of all things and this is one of them."

We all love company, yet we like to pick the same, and it is a pleasure to know we have friends and we enjoy their society. Nothing does us more good and gives us more pleasure than to have an old-timer come 'round and make us a visit, talk over old times, speak of those who have made the last round-up, asking about Bill or Jim, who became a "big one" but went glimmering during the drouth; of the big herds, the big round-ups, of the punchers who settled down, married, went to ranching and "grew up with the country" as the smoke from our pipes twined in unison to the ceiling. As we looked up we were reminded many of our castles we had built had floated as silently away as our "terbacker" smoke. was doing.—A. P., Sheridan, Wyo.

Aids in Home Nursing.

The simply equipped medicine chest and a knowledge of how to use it may often prevent serious illness in the home. Everything should be carefully labeled, particularly poisons. The chest should be kept above the reach of children and carefully locked. It should contain these items:

Castor oil.
Boric acid solution.
Boric acid powder or witch hazel.
Aromatic spirits of ammonia.
Lime water.
Carron oil.
Alcohol 95 per cent.
Eye cup.
Pieces of old clean linen.
Bandaging of 1, 2 and 3 inch.
Yard of sterile gauze.
Jar of sterile absorbent cotton.
Forceps.
Scissors.
Adhesive tape.
Drinking tube.
Epsom salts.
Soda.
Carboljzed vaseline.
Paper safety pins.
Iodine.

It is best to keep only a small amount of the home remedies on hand and replace them as needed with fresh stock.

Before attempting to treat a wound, the hands should be scrubbed thoroughly with brush, soap and water. Make certain that finger nails are clean. Scissors used in cutting gauze should first be boiled or washed with soap and water and wiped off with alcohol.

General Treatment for Poisons—
Emetics:
Mustard and water.
Salt and water.
Plenty of lukewarm water.
Cathartics:
Salts.
Castor oil.

2. Stimulant—Black coffee, aromatic spirits of ammonia ½ teaspoon to a third cup of hot water.

3. Poisons and their antidotes:

Carbolic Acid—Lime water and milk, equal parts.

Nitric or Oxalic Acid—Chalk, whiting or plaster. Give which ever is nearest.

Silver Nitrate—Strong salt solution.

Ammonia—Vinegar or lemon juice following castor or olive oil.

Arsenic—Milk and white of egg, or flour and water.

Bichloride of Mercury—White of egg (white of two eggs and pint of water).

Opium—Strong hot coffee, keep patient awake, using artificial respiration.

Poison Ivy—Wash in 3 per cent solution of boric acid solution, followed by zinc ointment.—Organized Farming.

Preserving Cider by Sulphite.

Cider can be preserved in a fresh sweet condition or after it has undergone the desired amount of alcoholic fermentation according to Walter G. Sackett of the Colorado Experiment Station, by adding sulphite of lime. Dissolve one-eighth to one-fourth ounce sulphite of lime in a quart of the cider to be squeezed; add this to three quarts more of cider and mix thoroughly in the jug. After standing several days it will be ready to bottle.

How to Clean Plumes.

Use large china bowl which is perfectly dry. Pour in 1 pint gasoline and wash feathers in this to remove worst of dirt. Empty and wipe the bowl dry, then pour in another pint gasoline and mix two tablespoons wheat flour. Stir until a thin paste is formed. Lay feather in paste and wash from stem out by rubbing with ends of your fingers. Do not rub back and forth as this ruffles flues. Squeeze gasoline out by drawing feather through closed hand. Shake in air until almost dry and roll feather in cornstarch. This does not remove the curl from feathers as does washing in soap and water. Feathers and plumes cleaned by this method can be made to look like new.

Forfeiture of a Lease.

If A leases his land to B for ten years and B does not live up to the lease, can A order him to move, and if so, can he make him vacate on 10 or 30 days' notice, or can B hold it till the first day of March, when the first year is up? If B has a straw pile, will he be allowed to move it, or does it remain on the place as manure? If A sells his place will that break the lease, or can B hold the place where it isn't spoken of in the lease.—Old Subscriber, Custer County, Colo.

Notice of forfeiture may be given and then suit to regain possession of the property may be brought. The straw may be moved. The lease goes with the land and is good until it expires, unless forfeited.—Hamlet J. Barry, 726 Equitable Bldg., Denver.

Thrift is shorthand for "Waste not want not."

Calumet is made under such exacting conditions—packed in such a scientific manner, that its leavening strength and purity never vary. It retains its original strength for months after leaving the factories.

When you tip the can to get the last spoonful, you know your baking will turn out all right—the last spoonful is the same as the first. This uniform quality of

CALUMET BAKING POWDER

is cause for its big demand. Housewives know they can depend upon the results obtained—that climatic conditions or temperature cannot deteriorate its positive leavening power.

When you buy baking powder remember these facts—that a uniform leavener means bakings that do not vary in quality—that Calumet *is* uniform.

A pound can of Calumet contains full 16 oz. Some baking powders come in 12 ounce instead of 16 ounce cans. Be sure you get a lb. when you want it.

Frantz's Famous Winter-Laying Leghorns

500 Pullets Laid 22,660 Eggs *In November December January*

(While other breeds and strains were boarding free.)

We sold the eggs on the market for $1,400 and produced them with $250 worth of feeds. $1,150 Profit in 3 Months. They Will Do the Same for You, as they have done for Thousands and Thousands of others.

Mrs. Kelly McEndoffer, Denver, sold $2,100 worth of eggs from 325 pullets in one year.

A. V. Brooks, California, gave our stock a trial last year. It proved more than good, and this season he wired for 7,200 hatching eggs.

A Kansas City man sold $75 worth of eggs daily in winter from less than 2,000 pullets; feed cost per day, $20.

E. Lambuth, Canon City, also sold $2,200 worth of **winter eggs** from 750 pullets in 4 months.

J. L. Safeblade, Illinois, gathered 246 eggs in December from 12 pullets.

We have more than proven our claims, and if you want the WINTER EGGS AND BIG PROFITS you MUST HAVE FRANTZ'S WINTER LAYING LEGHORNS. RESULTS ARE CERTAIN when purchased direct from us. GUARANTEED FERTILE HATCHING EGGS and 50,000 STRONG CHICKS alive at your door at prices you are SURE to make big profits. Come and see us. Write

Osee C. Frantz, Box F, Rocky Ford, Colo.

PLACE Your Order Now for EGGS OR BABY CHICKS

From Our Bred-to-Lay

S. C. W. LEGHORNS

The FOWLER EGG FARM STRAIN OF LEGHORNS has been bred for eggs, Hoganized and type-tested for so many years that they will give you a LARGER FLOCK AVERAGE of big white eggs and make you more real money than any other strain of Leghorns in the west. Our customers say so when sending back year after year for more eggs and chicks from The Fowler Egg Farm. A customer at Avondale, Colo., writes: "Can I get 500 chicks in March? I bought 500 from you last year; raised 238 pullets and 221 cockerels. I had 2,000 chicks in all from four other poultry farms. Your chicks were by far the best and healthiest that I received. I cannot say too much for the QUALITY of your stock; they are just as fine as can be had." These kind of letters and repeat orders are what count. There is a reason.

After many years af careful breeding and selecting for increased egg production we have developed a strain of extra large Leghorns that lay big white eggs. Our pullets mature quick, many laying at 4 months and 18 days and weighing 4 to 5 pounds in less than 9 months. The long deep bodied kind with large looped and folding combs. You cannot get better laying stock at twice our prices, no matter where you go. Write for Catalog, prices and facts from customers before you buy eggs or chicks. Its free and tells all. Write

FOWLER EGG FARM, Route 1-B, Fowler, Colo.

BLAKELAND Stands for QUALITY

S. C. White Leghorns
Blakeland Exhibition Leghorns

Winners, first pullet, St. Joseph, Mo., 1919; Kansas City, 1920, first cock; second, young pen; third, old pen; fourth, hen; fifth, pullet. 1922, Denver, fourth, young pen.

BLAKELAND BUSINESS LEGHORNS

Heaviest laying strain in America, trapnested and pedigreed for 10 Yrs. Egg records from 200 to 292 eggs per year. Winners heavy-laying class, Denver, 1920, first cock, first cockerel, first, second, third, fourth hens; first, second, fourth, fifth pullets; first in egg laying contest. In 1921 they won first, second, third, fourth cocks; first, fourth cockerels; first, second, third, fourth hens; fourth young pen, and finally the Sweepstake Cup.

ORDER NOW, BREEDERS, CHICKS, EGGS.
Write for Catalog.

BLAKELAND FARMS, Littleton, Colo.

LOWER'S POULTRY FARM

ARVADA, COLORADO.

Has developed a strain of all-year laying Single Comb Rhode Island Reds that will lift your mortgage and put you in the way of making money with poultry. **Descriptive Booklet on Request.**

STOCK, EGGS FOR HATCHING, BABY CHICKS.

SUNRISE S. C. WHITE LEGHORNS

Bred for heavy winter egg production, and they do it. 100 pullets laid in the three winter months 4,818 eggs, and better results later. You can do the same when the winter egg is bred in them. Give our winter-laying Leghorns a chance and you will be convinced. Write now and get our price list on guaranteed fertile hatching eggs and husky strong baby chicks that will live from free range hens. We have a few matured cockerels for this year's breeding for sale, from $2 up to $5.

SUNRISE POULTRY FARM.

F. W. Stanbridge & Son, R. R. 3, Rocky Ford, Colo.

BABY CHICKS AND HATCHING EGGS

FROM MERK'S FAMOUS STRAIN OF S. C. WHITE LEGHORNS, that have the laying habit bred into them through years of patient selecting and careful mating, and have the vitality to maintain it. Send today for circular and price list. We guarantee to please you and our prices will surprise you.

MERK'S POULTRY FARM, Box W, ROCKY FORD, COLO.

Profitable Farm Poultry

W. E. VAPLON.

Questions about the farm flock promptly answered by letter. Free advice on all phases of poultry production. Address all inquiries to Poultry Department, Western Farm Life, Denver, Colorado.

National Western Poultry Show.

PAUL C. JAMISON.

Even the least optimistic declare the poultry show which was a feature of the National Western Stock Show at Denver, January 14—21, the best ever held in the west. There were 1,500 birds of all colors and descriptions entered. The Rhode Island Red classes led with 500 entries. The show room was crowded with visitors from the time the doors opened Monday morning until they closed Saturday night.

The fifth district of the Rhode Island Red Club of America awarded $800 in special prizes for Reds in an effort to stimulate greater interest in exhibiting. They surely succeeded. There were seventy-five single-comb Rhode Island Red Cockerels entered in one class. The Red Club is working hard to secure the national convention and show for Colorado this year.

Judges James A. Tucker of Michigan, George M. Wells of Wisconsin and P. M. Pierce of Denver, declare that the quality of the birds shown in Denver this year was excellent, comparing favorably with the National Coliseum show in Chicago and the Madison Square Garden show in New York City.

After the awards were made two hundred ribbon winners cackled and crowed throughout the exhibition room. We dare say their owners did some crowing also. They surely had a right to because the competition was severe. When a person can breed and fit birds that will win in classes of seventy-five entries, he has a right to push out his chest a little.

Fifty poultry exhibitors were present from California, New Mexico, Oregon, Washington, Nebraska, Kansas and Utah, besides the long list of Colorado breeders.

The complete list of prize winners follows:

BUFF ORPINGTONS.

Cocks—R. M. Karns, Timnath, Colo, 1st; A. C. Andrews, Miller, Neb., 2d; D. Townsend, Edgewater, Colo., 3d; Mrs. E. F. Donhardt, Brighton, Colo., 4th; John Bowen, Littleton, Colo., 5th.

Hens—John Skinner, Herman, Neb.; 1st; R. M. Karns, 2d; B. D. Townsend, 3d, 4th; A. C. Andrews, 5th.

Cockerels—R. M. Karns, 1st, 2d; A. C. Andrews, 3d; B. D. Townsend, 4th, 5th.

Pullets—John Smihula, Fort Collins, 1st; A. C. Andrews, 4th; R. M. Karns, 3d, 5th; B. D. Townsend, 2d.

Young Pens—B. D. Townsend, 1st, 3d, 4th; R. M. Karns, 2d; J. T. Maner, 5th.

Old Pens—B. D. Townsend, 1st, 2d, 5th; R. M. Karns, 3d; John Bowen, 4th.

PARTRIDGE ROCKS.

Cocks—C. R. Bingaman, Yuma, Colo., 1st; J. O. Sledge, Denver, 2d.

Hens—C. R. Bingaman, 1st, 4th; J. O. Sledge, 2d, 3d.

Cockerels—J. O. Sledge, 1st, 2d.

Pullets—J. O. Sledge, 1st, 2d.

Young Pens—J. O. Sledge, 1st.

S. C. BUFF LEGHORNS.

Cocks—Fred Monroe, Denver, 1st.

Hens—Fred Monroe, 1st, 2d, 3d, 4th; Alice Byers, Denver, 5th.

Cockerels—Fred Monroe, 1st, 2d; Alice Byers, 3d.

Pullets—F. H. Monroe, 1st, 2d.

Young Pens—Fred Monroe, 1st.

S. C. ANCONAS.

Cocks—James Clevenger, Rocky Ford, Colo., 1st.

Hens—James Clevenger, 1st; C. E. Leisenring, Denver, 2d, 3d.

Cockerels—James Clevenger, 1st, 2d, 3d; Charles Hawkins, Englewood, 4th.

Pullets—James Clevenger, 1st, 2d; C. E. Leisenring, 3d, 4th, 5th.

SILVER SPANGLED HAMBURGS.

Hens—M. F. Yegge, Denver, 1st.

Cockerels—M. F. Yegge, 1st.

Pullets—M. F. Yegge, 1st.

BARRED ROCKS—DARK.

Cocks—W. J. Hooker, Colorado Springs, 1st; Wm. C. Keanmaster, Englewood, 2d; Henry Kranz, Colorado Springs, 3d; G. W. Scott, Fort Collins, 4th.

Hens—Wm. Keanmaster, 1st, 2d; G. W. Scott, 3d; Wm. DeReus, Denver, 3d; Henry Kranz, 4th; Horace Beardsley, Eugene Ore., 5th.

Cockerels—Wm. Keanmaster, 1st; G. W. Scott, 2d; Benj. Scott, Denver, 3d; Henry Kranz, 4th; Horace Beardsley, Eugene, Ore., 5th.

Pullets—Wm. Keanmaster, 1st; T. O. Whitehead, Colorado Springs, 2d; J. O. Watts, Eugene, Ore., 3d; Wm. DeReus, 4th; Wm. Keanmaster, 5th.

Young Pens—Wm. Keanmaster, 1st; Wm. De Reus, 2d; J. O. Watts, 3d; Geo. W. Scott, 4th; V. L. Smith, Englewood, 5th.

Old Pens—Wm. Keanmaster, 1st; G. W. Scott, 2d.

BARRED ROCKS—LIGHT.

Cocks—Horace Beardsley, 1st; H. H. Chase, Colorado Springs, 2d.

Hens—Wm. Keanmaster, 1st, 3d, 4th; Benj. Scott, Denver, 2d; H. H. Chase, 5th.

Cockerels—Benj Scott, 1st, 3d; Neils R. Neilson, 2d, 4th; G. W. Scott, 5th.

Pullets—Wm. Keanmaster, 1st, 2d, 3d, 4th; G. W. Scott, 5th.

Young Pens—Wm. Keanmaster, 1st; N. R. Nellson, 2d; Clyde E. Jones, Nunn, Colo., 3d; G. W. Scott, 4th.

Old Pens—G. W. Scott, 1st.

WHITE ORPINGTONS.

Cocks—John A. Carruthers, Colorado Springs, 1st; Alfred Betts, Salt Lake City, Utah, 2d.

Hens—Alfred Betts, 1st; John A. Carruthers, 2d.

Cockerels—John A. Carruthers, 1st, 2d; Alfred Betts, 3d.

Pullets—John A. Carruthers, 1st, 3d; Alfred Betts, 2d.

SINGLE COMB WHITE MINORCAS.

Cockerels—G. H. Twining, Englewood, Colo., 1st.

Pullets—G. H. Twining, 1st.

WHITE ROCKS.

Cocks—W. M. Matthews, Advada, Colo., 1st; John Jesser, Denver, 2d, 3d; D. B. Townsend, Edgewater, Colo., 4th; W. K. Pfrimmer, Yuma, Colo., 5th.

Hens—W. M. Matthews, 1st; B. D. Townsend, 2d, 4th, 5th; F. L. Toliver, Ft. Collins, Colo., 3d.

Cockerels—F. L. Toliver, 1st, 4th, 5th; W. M. Matthews, 2d; B .D. Townsend, 3d.

Pullets—F. L. Toliver, 1st; B. D. Townsend, 2d, 5th; W. M. Matthews, 3d; F. L. Toliver, 4th.

Young Pens—D. B. Townsend, 1st, 3d; W. M. Matthews, 2d; John Jesser, 4th; F. L. Toliver, 5th.

Old Pens—B. D. Townsend, 1st, 4th; F. L. Toliver, 2d; W. M. Matthews, 3d.

BUTTERCUPS.

Cocks—J. C. Seevers, Las Animas, Colo., 1st, 2d.

Hens—J. C. Seevers, 1st, 2d.

Cockerels—J. C. Seevers, 1st.

Pullets—J. C. Seevers, 1st, 2d.

Young Pens—J. C. Seevers, 1st.

S. C. BROWN LEGHORNS—DARE.

Cocks—G. H. Twining, 2960 S. Fox, Englewood, Colo., 1st; H. W. Batchelder, Sterling, Colo., 2d.

Hens—H. M. Batchelder, 1st.

Cockerels—H. M. Batchelder, 1st, 2d; G. H. Twining, 3d.

Pullets—G. H. Twining, 1st, 2d.

WHITE WYANDOTTES.

Cocks—Wm. Stocker, Denver, 1st, 2d; Richard Matoush, Julesburg, Colo., 3d.

Hens—Mrs. F. G. Luce, Denver, 1st, 5th; Richard L. Matoush, 2d; Wm. Stoucke, 3d; Mrs. Loving, Pueblo, Colo., 3d.

Cockerels—Wm. Stocker, 1st, 2d, 3d; Mrs. Ida Loving, 4th, 5th.

Pullets—Mrs. F. G. Luce, 1st, 2d.

Young Pens—Mrs. F. G. Luce, 1st; Chas. Viestenz, Loveland, Colo., 2d.

Old Pens—Geo. W. Dyer, Cedaredge, Colo., 1st; Wm. Stocker, 2d.

BLACK ORPINGTONS.

Cockerels—W. R. Pyburn, Yuma, Colo., 1st.

Pullets—W. R. Pyburn, 1st, 2d.

Young Pens—Mary Lossaso, Denver, 1st, 2d.

S. C. WHITE LEGHORNS.

Cocks—John H. Gover, Denver, 1st, 2d, 3d, 5th; W. H. Sanders, Wheatridge, Colo., 4th.

Hens—W. H. Sanders, 1st, 3d; John H. Gover, 2d, 4th, 5th.

Cockerels—J. H. Gover, 1st, 2d; W. H. Sanders, 3d; E. J. Bell, Boulder, Colo., 4th; A. J. Byers, Denver, 5th.

Pullets—John H. Gover, 1st, 5th; W. H. Sanders, 2d; A. J. Byers, 3d; Pete Adler, Fort Morgan, 4th.

Young Pens—John H. Gover, 1st, 3d; W. H. Sanders, 2d, 5th; M. Blake Kinkel, Littleton, Colo., 4th.

Old Pens—John H. Glover, 1st, 2d; W. H. Sanders, 3d.

SILVER WYANDOTTES.

Cocks—Earl Wood, Gill, Colo., 1st.

Hens—Mrs. W. A. Smith, Denver, 1st, 2d.

Cockerels—Mrs. A. Smith, 1st, 2d, 4th; Earl Wood, 3d.

Pullets—Mrs. A. Smith, 1st; Earl Wood, 2d.

BUFF WYANDOTTES.

Cockerels—M. F. Yegge, Denver, 1st.

Pullets—M. F. Yegge, 1st, 2d.

WHITE FACE BLACK SPANISH.

Pens—W. L. Smith, Englewood, Colo., 1st.

SPECKLED SUSSEX.

Cocks—H. M. Batchelder, Sterling, Colo., 1st.

Hens—H. M. Batchelder, 1st, 2d.

LIGHT BRAMAHS.

Cocks—Cornelia Bovey, Englewood, Colo., 1st, 2d; J. Stephenson, Englewood, Colo., 3d.

Hens—Cornelia Bovey, 1st, 2d; J. Stephenson, 3d.

Cockerels—Cornelia Bovey, 1st, 2d, 3d; E. C. Mershimer, Westminster, 4th; J. Stephenson, 5th.

Pullets—Cornelia Bovey, 1st, 2d, 4th; J. Stephenson, 3d.

Young Pens—Cornelia Bovey, 1st.

Old Pens—Cornelia Bovey, 1st; J. Stephenson, 3d.

WHITE CRESTED BLACK POLISH.

Cocks—Holland Poultry Farm, Edgewater, Colo., 1st.

Cockerels—Holland Poultry Farm, 1st, 2d.

Hens—Holland Poultry Farm, 1st, 2d.

Pullets—Holland Poultry Farm, 1st.

ROSE COMB REDS.

Cocks—John Elston, Colorado Springs, 1st; Mrs. C. E. Lindstrom, Wilcox, Neb., 2d, 3d, 6th, 7th, 8th; Holland Poultry Farm, 5th; La Belle Ranch, Aurora, 9th; A. W. Swedberg, Denver, 4th.

Hens—Mrs. C. E. Lindstrom, 1st, 2d; Chas. Junker, Cambridge, Neb., 5th; A. W. Swedberg, 7th; W. H. Reuping, 3d, 8th; F. R. Schraeder, Littleton, Colo., 4th, 6th; Mrs. Fred Reed, Louviers, 5th.

Cockerels—Mrs. C. E. Lindstrom, 2d, 3d, 5th, 6th, 9th, 10th; Chas. Junker, 1st, 8th; Mrs. C. E. Lindstrom, 4th, 7th.

Pullets—F. R. Schraeder, 1st; Chas. Junkeer, 2d, 3d, 4th; A. W. Swedberg, 5th; W. H. Reuping, 8th; LaBelle Ranch, 9th; Lawrence Carper, 6th, 7th; W. J. Nicholson, 10th.

Young Pens—Mrs. Alex Lehl, Brighton, Colo., 1st; Chas. Junker, 2d; Mrs. C. E. Lindstrom, 3d; W. H. Reuping, 5th, 6th; Mrs. C. E. Lindstrom, 7th; W. J. Nicholson, 8th; A. W. Swedberg, 9th; LaBelle Ranch, 10th.

Old Pens—C. C. Haskins, Alma, Neb., 1st; W. H. Reuping, 2d, 4th; Mrs. C. E. Lindstrom, 3d; A. W. Swedberg, 5th.

S. C. RHODE ISLAND REDS.

Cocks—Ethel M. Thomas, Aurora, Colo., 3d, 6th; Parsons Bros., Denver, 8th; J. R. Wilson, Denver, 2d; B. D Townsend, 1st, 4th, 5th, 7th, 10th; John J. Nellein, Denver, 9th.

Hens—B. D. Townsend, 1st, 2d; F. X. Price, Moneta, Calif., 8th; Fred B. Pritchett, Englewood, 6th; Holland Poultry Farm, 9th, 10th; J. R. Wilson, 7th; Parsons Bros., 5th; La Belle Ranch, 3d; S. V. Este, Denver, 4th.

Cockerels—J. B. McCollum, 9th; J. R. Wilson, 3d; W. F. Shipman, Edgewater, 6th, 8th; C. P. Hay, Albuquerque, N. M., 2d; J. J. Mellein, 7th;

F. A Neitzel, Falls City, Neb., 4th; B. D. Townsend, 1st, 10th; Geo. M. Littler, Englewood, 5th.
Pullets—H. C. Wittman, Lincoln, Neb., 1st, 4th, 8th; B. D. Townsend, 2d, 9th, 10th; R. H. McRae, Englewood, 5th; C. P. Hay, Albuquerque, N. M., 6th; John J. Mellein, 3d; J. R. Wilson, 7th.
Young Pens—B. D. Townsend, 1st, 2d, 7th, 5th; J. R. Wilson, 3d; C. P. Hay, 9th; J. J. Mellein, 4th, 6th, 8th; Mack P. Davis, Pueblo, 10th.
Old Pens—B. D. Townsend, 1st, 2d, 3d; Mack P. Davis, 8th; H. C. Taylor, 4th; J. E. Zimmer, 7th; La Belle Ranch, 9th; R. J. McRae, 6th; J. J. Mellein, 5th.

SINGLE COMB BLACK MINORCAS.

Cocks—C. A. Spickerman, Colorado Springs, 1st, 4th; H. L. Holmberg, 2d; A. J. Byers, 3d; H. R. Suydam, 5th.
Hens—C. A. Spickerman, 1st; Geo. Frederickson, Littleton, Colo., 2d; A. J. Byers, 3d; L. R. Winston, Colorado Springs, 4th; H. L. Holmberg, 5th.
Cockerels—C. A. Spickerman, 1st, 3d; H. R. Suydam, 2d; C. A. Spickerman, 5th.
Pullets—Holmberg Bros., 1st, 3d, 5th; C. A. Spickerman, 2d; Geo. Frederickson, 4th.
Young Pens—H. R. Suydam, 1st, 2d.
Old Pens—C. A. Spickerman, 1st.

BLUE ORPINGTONS.

Cockerels—H. L. Moore, Pueblo, Colo., 1st, 2d.
Pullets—H. L. Moore, 1st, 2d.

WHITE CRESTED WHITE POLISH.

Cocks—Holland Poultry Farm, Edgewater, Colo., 1st.
Hens—Holland Poultry Farm, 1st, 2d, 3d, 4th.

PARTRIDGE WYANDOTTES.

Cocks—S. C. Howard, Denver, 1st.
Hens—S. C. Howard, 1st.
Cockerels—S. C. Howard, 1st.

BLACK LANGSHANS.

Cocks—O. I. Moon, Fort Morgan, 1st, 2d, 5th; T. E. Deaver, Stamford, Neb., 3d, 4th.
Hens—T. E. Deaver, 1st, 2d, 4th; Mrs. F. M. McAdoo, Colorado Springs, 2d.
Cockerels—T. E. Deaver, 1st, 3d, 4th; O. I. Moon, 2d; John Miller, Arvada, Colo., 5th.
Pullets—T. E. Deaver, 1st, 2d, 3d; Z. M. McIntosh, 4th, 5th.
Young Pens—T. E. Deaver, 1st; O. I. Moon, 2d
Old Pens—T. E. Deaver, 1st.

SILVER SEBRIGHTS.

Cocks—R. E. Finnicum, Kiowa, Colo., 1st.
Hens—R. E. Finnicum, 1st.

GOLDEN SEBRIGHTS.

Hens—R. E. Finnicum, 1st.

BRONZE TURKEYS.

Cocks—Cora DeFrance, Berthoud, Colo., 1st, 2d; W. A. Berry, Denver, 3d, 5th; A. W. Walters, Arvada, Colo., 4th.
Hens—Cora DeFrance, 1st; A. W. Walters, 2d; W. A. Berry, 3d.
Cockerels—Cora DeFrance, 1st; Mrs. Fred Reed, 3d; A. W. Walters, 4th.
Pullets—Cora DeFrance, 1st; A. W. Walters, 2d.

BROWN CHINESE GEESE.

Young Gander—Cora DeFrance, Berthoud, Colo., 1st.
Young Goose—Cora DeFrance, 1st.

WHITE MUSCOVEY DUCKS.

Drake—C. F. Grotz, Edgewater, Colo., 1st.
Duck—C. F. Grotz, 1st.

COLORED MUSCOVEY DUCKS.

Young Drake—W. A. Berry, Denver, 1st.
Young Duck—W. A. Berry, 1st.

GRAY TOULOUSE GEESE.

Old Gander—Mrs. O. W. Murphy, Arvada, 1st.
Old Goose—Mrs. O. W. Murphy, 1st.
Young Gander—Mrs. O. W. Murphy, 1st.
Old Goose—Mrs. O. W. Murphy, 1st.

BOURBON RED TURKEYS.

Cock—Mrs. D. Williams, Brighton, Colo., 1st.
Hen—Mrs. D. Williams, 1st.

Order Baby Chicks Now.

The baby chick industry has assumed proportions far beyond the anticipation of those who have been instrumental in developing it, and the indications are that there will be even greater demand for chicks than ever. Therefore, it is advisable to get in your orders early. There is no reason why there can not be a succession of orders. That is, buy the early chicks, and then buy later as the season progresses.

It will be remembered that last season there was a great rush for March and April hatched chicks. When people were advised to buy May and later hatched chicks, hundreds of them decided not to buy at all but to wait and buy pullets. As a result there is a great demand at present for pullets and everyone who wants them is not going to be supplied.

So, once again, we come forward with our editorial on this subject of getting your orders in early for next season's chicks. The large hatcheries are booked into April already and every baby chick man of known reputation for high quality stock is daily entering orders for chicks for February, March and April delivery.—Pacific Poultryman.

Wants Darker Yolks.

I have some S. C. W. Leghorn pullets that are laying and the yolks of the eggs are pale yellow color and I wish to know what their ration lacks to color the yolks up to a nice golden orange color. Here is what I am feeding them at present:

Dry mash, containing one-half shorts, two-thirds bran before them at all times. Wet mash at noon: Same as above.

Scratch grains, threshed wheat in deep litter in morning. Maize in the head before them most all the time. Also feed them some shelled corn at night before roosting time. I keep coarse sand before them, but have not been able to get any oyster shell at town so far. I did feed them fine charcoal in their wet mash up to a few days ago. Also have been feeding them an occasional jackrabbit. We feed them scraps from the table, too.—J. W. F., Kansas.

Your feeding program for your chickens is very good with the exception that you should give them some succulent or green feed if possible. This will have the tendency of making the yolks darker. Sprouted oats will answer the purpose for the green feed and succulence is secured in feeding stock beets or other root crops. Your hens may do very well on the dry feed, but better results will be secured if you can follow the above suggestions.

Symptoms Denote Roup.

My hens seem to be in perfect health, have red combs and eat heartily, but their eyes swell up and shut. I thought perhaps it was because they were too warm. It has affected the young chickens as well as the old ones. What is the trouble and what the cure?—B. W., Arapahoe County, Colo.

The symptoms you describe denote roup. Isolate the sick fowls, dust them for lice, feed lightly on soft feeds. If the fowls are not too far gone to save, cut open the swellings and swab the wounds with a 5 per cent solution of carbolic acid or other disinfectant. Provide the same conditions in the poultry house that you provide for the family's sleeping rooms, comfort, not warmth, neither cold drafts; pure air and a moderate temperature. Above all, avoid crowding; better dispose of half the flock if the roosting quarters are sufficient for only half the number you have. —W. E. V.

Looks Like Diphtheritic Roup.

What is the trouble with my chickens? They get a high fever, rattle in the throat; some have cankers in the mouth. They have a greenish discharge of bowels; their head they keep drawn back and their neck laying around also. I keep the sick ones from the others. I gave germozone for a while but they didn't seem to get any better, so I am putting carbolic acid in the water. I had about 110 before they commenced to get sick in a hen house 11x24, and they have free range outside and run to a patch of fall wheat when there isn't snow on the ground and when it is bad weather we always clean off a space and have straw for them. Give alfalfa and vegetables when confined and have been giving them rabbits for meat scraps.—F. S., Weld County, Colo.

It is most likely that your fowls have diphtheritic roup. You are doing about all for them that is possible except that you might be even more merciless, getting rid of every one that shows the least sign of a cold. You are keeping more in the house than the space warrants, but cleanliness helps to overcome this to some extent. We have little faith in remedies, although the disinfectants you are using will help to prevent the disease spreading. I am sorry we cannot give you a sure cure, but feel certain that isolating the light cases and killing off the bad cases will solve the problem within a short time. —W. E. V.

About the "Beards" of Turkeys.

Do early hatched turkey pullets grow a beard or start growing them by this time of year? Am told that they do and by others they do not.—Subscriber, Otero County, Colo.

At the age of 4 weeks there is no trace of red on the heads and necks of the poults, but at 5 weeks the caruncles or comb begin to form, and when 6 weeks of age a trace of red can be seen forming in the caruncles under the feathery down of the neck; this down is gradually shed from the under part of the neck. At 7 weeks the red can be seen at some distance on the under part of the necks of males, but is not plainly visible on females until about the eighth week. It is only by careful comparison, however, that the sex of young turkeys can be distinguished before they are three months of age, at which time a very small fleshy protuberance appears on the breast of the male, emerging from which the beard or tassel can be seen about two weeks later. At the age of 3½ months the beard begins to grow from the breast of the male turkey and at 1 year of age it is from 3 to 5 inches long, becoming longer each year. When about a year old turkey hens begin to grow beards. The beard of the tom is much longer and coarser than that of the hen, however, and his feathers stop far down on the neck, while in the case of the hen there is a light growth extending in a rather narrow strip along the back of the neck to the top of the head. The "dewbill," or fleshy appendage just about the beak, is larger and more elastic in the male than in the female. Young toms under one year of age have only a short, blunt knob on the inside of the shank, which, as the bird grows older, develops into a stout spur, while in the hen only a rudimentary spur or small button is found.

One of the finest showings of turkeys made at the Stock Show was the exhibit by Miss Cora De France of Berthoud, Colo. Miss De France won four first and two second prizes on the six birds which she showed and reported sales of four pullets to be shipped to Utah.

SELL YOUR EGGS and BREEDING STOCK

THROUGH THE POULTRY COLUMNS OF

Western Farm Life

55,000 CIRCULATION GUARANTEED

These 55,000 farmers and stockmen are the very people you want to reach—they are the very people who want to buy what you have to offer. If you have never used the Poultry Columns of Western Farm Life, you have missed an opportunity for quick sales.

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Stop my ad. I have more orders than I can fill. If I am in the baby chick business next year I will know where to send my advertising to get results.—Mrs. Alex Leitch, Parkerville, Kan.

I must say that I have been very well pleased with the results of my advertising in your magazine.—Mrs. Anna Hege, Sedgwick, Kan.

"YOU SELL 'EM TOO FAST FOR ME."
I have sold out all I have for a while. You sell them too fast for me. That is the stuff.—O. W. Dubbs, Douglas, Kan.

Enclosed check for my ad. Your paper is certainly all right. My cockerels are all sold. —Mrs. Raymond Voss, Hubbard, Neb.

SHIPPED TO SEVEN STATES.
I have shipped to seven different states from Western Farm Life ads.—F. L. Tolver, Fort Collins, Colo.

Am certainly well pleased with results from my ad in your publication.—W. W. Officer, Fowler, Colo.

90% FROM WESTERN FARM LIFE.
We get better results from our ad in Western Farm Life than all the rest of our advertising combined. Nineteenths of our orders were from our ad in Western Farm Life.—Riverside Poultry Farm, LaJunta, Colo.

I have sold all my cockerels. The pulling power of Western Farm Life is very much appreciated.—E. A. Miller, Alma, Neb.

CLASSIFIED RATES—5c per word per insertion if your ad is run four times or more. Short time rate, 7c per word.
Write for attractive rates on Poultry display advertising.
Fix up that little ad TODAY, and send it in at once so it will be in time for the next issue.

WESTERN FARM LIFE
1518 COURT PLACE. DENVER, COLO.

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We want every poultry raiser in this vicinity to have a copy of DARLING'S new poultry book. Written by a former Government expert, it tells all about the feeding methods of famous poultry men and how they use

DARLING'S MEAT CRISPS

to increase their poultry profits. It tells how to make your hens lay all winter long. How to start the pullets laying early. How to produce fertile eggs for hatching. How to make your chicks grow bigger and faster. Come in and get your copy of this valuable book today—it's free.

Agents:
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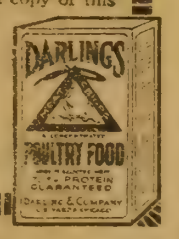
Littleton, Colo.

No. 204



Mr. Farmer

Do You Know

That you can make more money on 5 acres with Hens than on 40 acres with any crop you can plant, and with less work? AND

DO YOU KNOW THAT THE

MOTTLED ANCONA

is the most profitable hen you can keep? Government statistics prove that Anconas produce **more eggs** and **larger eggs** per 100 pounds of feed than any other breed on earth, and this in the winter, when eggs bring the big prices.

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Place your order NOW for these chicks or hatching eggs or we may be entirely booked up later. Can make shipment at any time you name. Chicks hatched every week.

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Start this year making money with poultry. Do away with your culls and mixed flocks. They do not pay.

GET ANCONAS, and you can sell your eggs and stock at handsome profits.

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Were Winners of the Blue 1921 at National Western, State Fair, Pikes Peak and Denver Championship Shows. Also first prize Cockerel at State Fair, was first prize Cockerel in Utility, at Denver.
EGGS, BABY CHICKS, COCKERELS.
4501 SOUTH BROADWAY
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BABY CHICKS Fifteenth Annual Season. Book your order with us. All leading varieties from best selected Hogan-bred flocks. The kind that's bred to lay. With years of experience at the business and the proper equipment to meet your requirements we can give you best service. **Shelton Poultry Co.** Box 3
Write for price list. Alcott Sta., Denver

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R. F. NEUBERT Co., Box 853 Mankato, Minn.

Baby Chicks
NEW LOW PRICES SEASON 1922
MILLER BABY CHICKS ARE BRED FOR HEAVY EGG PRODUCTION
Customers report pullets lay all winter. 20 varieties to select from. 1,000,000 chicks via prepaid parcel post safe delivery guaranteed. Pleased customers in every state. 19th season. Catalog FREE.
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Box 605 LANCASTER, MO.

SINGLE COMB
WHITE LEGHORNS
200 heavy winter laying pullets lay 9,887 winter eggs in Nov., Dec., Jan. Eggs sold to the market for $411.76, with $71.65 worth of feed. Profit, $340.11.
HATCHING EGGS, GUARANTEED FERTILE.
DAY-OLD CHICKS.
Catalog Free on Request.
The Ordway Poultry Farm,
J. Schleining. Ordway, Colo.

Poultry Classified Advertising will be found on page 20 of this issue. Be sure to look this page of small ads over.

Farmers' and Stockmens' Exchange

Advertisements will be inserted in this department for 7c per word; four or more insertions, 5c a word each insertion. Remittances can be made by postoffice money order or personal check. Advertisements are set in uniform style, no display type or illustrations admitted under any circumstances. Every figure and initial counts as one word. Guaranteed circulation over 55,000 copies each issue. WESTERN FARM LIFE is issued semi-monthly the first and fifteenth of each month. Advertising copy for this department must reach us ten days before date of issue. It carries the most classified advertising because it gives you best results. Send us in a trial advertisement. Write for proof showing how these columns pay advertisers.

POULTRY

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PURE BARRED ROCK COCKERELS—$2 AND $3; none better. A. J. Joslyn, Gillette, Wyo.

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300 BIG FINE BARRED ROCK COCKERELS; pullets $5 up; utility, show birds. Dr. Flippin, Stromsburg, Nebr.

BARRED PLYMOUTH ROCKS, BRED FROM trap-nested heavy laying stock; winners in public contest. John Tobias, Wheatridge, Colo.

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BARRED PLYMOUTH ROCKS—COCKERELS, both dark and light, $3, $4 and $5 each. Bradley and Latham strains. Chester Blunt, Route 1, Greeley, Colo.

WARREN'S QUALITY WHITE ROCKS, FISHEL strain direct, winners of firsts and sweepstakes for five years in Jewell county. Breeding stock carefully selected, "eggs" and "baby chicks" for sale. Warren's Eclipso Poultry Farm, Mankato, Kans.

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S. C. WHITE LEGHORNS—EGGS, 15, $1.50; 100, $6. Baby chicks, 100, $16. W. L. Stokesberry, LaJunta, Colo.

ROSE-COMB BROWN LEGHORN COCKERELS; State Fair winners, $2.50 each; 3 for $6. Mrs. John Heins, Gresham, Nebr.

ROSE COMB GOLDEN BUFF LEGHORN COCKerels; winter layers, $2.50; five for $11. H. A. J. Coppins, Arnold, Kan.

S. C. WHITE LEGHORN COCKERELS; TOM Barron 280-egg strain, $2.25 each, 3 or more, $2 each. Wm. Draves, Lemoyne, Neb.

WHITE LEGHORN BABY CHICKS AND HATCHing eggs; Hoganized stock, 250-egg strain. Mrs. H. L. Bloomfield, R. R. 3, LaJunta, Colo.

BABY CHICKS, 20c; EGGS, 8c; S. C. WHITE Leghorn heavy laying strain; satisfaction guaranteed. Mrs. B. E. Marvin, Rt. 3, LaJunta, Colo.

WINTER LAYING LEGHORN CHICKS—PEN A, 200 eggs up, 25c each; general flock, 185-egg average, 18c each. Hoganized 7 years. D. C. Deringer, LaJunta, Colo.

S. C. WHITE LEGHORN EGGS—CHICKS, FROM 32 prize-winning birds with highest egg production. The kind you want. Request mating list. Underwood Poultry Farm, Hutchinson, Kan.

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SINGLE COMB WHITE LEGHORNS, VERY large type, pure white, standard bred; pens, Hoganized 200 to 250 egg type; breeder for seven years. Specialty, heavy winter laying strain. Hatching eggs, day-old chicks. T. C. Mountain, La Junta, Colo.

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CHOICE SINGLE COMB RED COCKERELS; also eggs and chicks. Gifford Ernest, Rocky Ford, Colo.

ROSE COMB RED COCKERELS FROM HOGANized, heavy winter layers, $3. Baby chicks. Mrs. Alex. Leitch, Parkersville, Kans.

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R. C. COCKERELS, BRED FROM WINNERS AT the big shows. 14 silver cups and a bushel of blue ribbons. Eggs, $10 per 100. Best range flock ever turned out. Mrs. B. Dougherty, Norwich, Iowa.

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PUREBRED WHITE LANGSHAN COCKERELS, from penned flock, $4 $5 each; large and beautiful. Jas. Bennett, Plainell, Kans.

BLACK LANGSHAN, UTILITY EXHIBITION cockerels, $3, $5 and up. Oscar Moon, Fort Morgan, Colo.

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EXCEPTIONAL QUALITY WHITE WYANDOTTE eggs, $1 per setting, $5 per 100. Folder free. Richard Matoush, Julesburg, Colo.

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FOR SALE — THREE WHITE FAVEROLLE roosters; have five toes and muff; breed originated from Faverolle, France. Mrs. Gilbert Ecker, Rt. 2, Box 69, Limon, Colo.

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SEVERAL VARIETIES.

"1949 COCKERELS, HATCHING EGGS, 49 VArieties." Free book. Aye Bros., Box 17, Blair, Nebr.

68 VARIETIES FINE PUREBRED POULTRY stock; eggs, chicks; large catalog 4c. A. Ziemer, Austin, Minn.

DUCKS—ROUENS, PEKINS, RUNNERS, MUScovys. Geese, African, China, Toulouse. John Hass, Bettendorf, Iowa.

CHICKS, 8c UP; ALL VARIETIES; POSTPAID; guaranteed; large illustrated catalog free. Superior Farms, Windsor, Mo.

PURE BUFF ORPINGTON COCKERELS, $1.50; trio, $4. Pure Buff Leghorn cockerels, $1.25; trio, $3. Jennie Snelling, Eckley, Colo.

BABY CHICKS FROM WINTER LAYERS, LEADing varieties; husky, vigorous kind; new prices; safe arrival guaranteed. Catalog free. Sarver Poultry Farm, Hastings, Neb.

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YOU BUY THE BEST CHICKS FOR THE LEAST money; guaranteed alive or replaced free; from Colwell Hatchery, Smith Center, Kans. Leading varieties; thousands to ship everywhere; order early; 8c to 20c each.

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BABY CHICKS—HATCHED FROM THE BEST Hoganized laying flocks in Colorado, and every one has a good chance to live and make you money. Every one hatched in our Denver hatchery, capacity 38,000 eggs. Non-freeze founts, keep water warm and make hens lay more eggs. Tell us your wants. The Denver Incubator Co. & Hatchery, 173 S. Broadway, Denver, Colo.

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Assorted broilers	$ 7.00	$13.00	$62.50
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S. C. Br. Leghorns	8.00	15.00	72.50
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Barred Rocks	9.00	17.00	82.50
S. C. R. I. Reds	9.50	18.00	87.50
R. C. R. I. Reds	9.50	18.00	87.50
Black Minorcas	9.50	18.00	87.50
White Wyandottes	10.00	19.00	92.50
White Rocks	10.00	19.00	92.50
Buff Orpingtons	10.50	20.00	97.50

Best strains, farm raised, good stuff. You need pay high prices no more. J. A. Tracy, Poultryman, Fort Morgan, Colo.

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PUREBRED WHITE HOLLAND TURKEY TOMS, $10. Mrs. Chester Porter, North Platte, Neb.

IDEAL MAMMOTH BRONZE UNRELATED TOMS, 20—32 lbs., $10—$20; hens, $6—$8. Scott Linville, Lamar, Colo.

MAMMOTH BRONZE TOMS, 20 TO 45 LBS., $10—$35; 15 lb. pullets, $8. Laura Ullom, Route 2, Lamar, Colo.

MAMMOTH BRONZE YOUNG TOMS, 22 TO 30 lbs., $15 to $18, June and July hatch. Hens, 13 to 20 lbs., $10 to $15 each. Wm. Draves, Lemoyne, Neb.

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WHITE CHINESE GOOSE EGGS, 40c; GANDERS, $3.50. White Runner baby ducks, eggs. Vivian Anderson, Oswego, Kan.

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FOR SALE—ONE SURE-HATCH INCUBATOR, 200-egg; one Porter Incubator, 200-egg; one 52-inch canopy top brooder. Also 48 Sicilian Buttercup hens. C. F. Fuller, Carbondale, Colo.

THE DENVER INCUBATORS WILL HATCH EVery egg any other machine will hatch, besides some others won't hatch. The price is right, the service right, and the incubator is right. Colony Brooders—Hot-Blast, coal burning brooders, or Sol-Hot oil burning brooders, will raise your chicks to perfection. The Denver Incubator Co. & Hatchery, 173 S. Broadway, Denver, Colo.

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FERRETS FOR SALE—PRICE LIST FREE. Book on ferrets, 10c. Ferret muzzles 25c each. Bert Ewell, Wellington, Ohio.

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CATTLE.

REGISTERED HEREFORD BULLS—DOMINO-Anxiety bred. Priced to sell. Mrs. Mattie Flowers, Moriarty, N. M.

HOLSTEIN AND GUERNSEY CALVES, $25 each, crated for shipment anywhere. Edgewood Farms, Whitewater, Wis.

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A. S. McCABE, YOAKUM, TEXAS, SAYS: "I had a fine young horse with the worst case of fistula I ever saw, and after using Hutchison's Big Head Liniment, he is completely cured. I also find it good for side bone and can recommend it to be the best liniment on the market." Hutchinson's Big Head Liniment is guaranteed to cure fistula, poll evil, splint, spavin, sweeny, ring-bone, scratches, and will remove wind galls and sitfasts. Send 60c in stamps for bottle by return mail; satisfaction guaranteed or money refunded. Hutchinson Medicine Co., Texarkana, Texas.

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GEORGE WM. FUHRMANN, KERSEY, COLO., has four fine June Berkshire boar pigs for sale at $35 per head.

ORION CHERRY KING 15TH BOARS OUT OF Defender sows will put extra dollars in your hog lot. The price is right. J. O. D. Ranch, Aroya, Colo.

FAMOUS EDGEMOOR DUROC JERSEY YEARling gilts, average 400 pounds, bred to champion boar for spring farrow; also open spring gilts of exceptional type. The results of many years' careful breeding. W. H. Marshall, Rt. 3, Littleton, Colo.

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I WANT FARMS AND LAND FOR CASH BUYers. Will deal with owners only. R. A. McNown, 834 Wilkinson Bldg., Omaha, Neb.

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SELL YOUR PROPERTY QUICKLY FOR CASH, no matter where located. Particulars free. Real Estate Salesman Co., Dept. 11, Lincoln, Neb.

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SAVE AGENTS' COMMISSIONS—BUY DIRECT—We have complete stock of fruit, shade and ornamental trees, vines. Send us your list for prices. Northern Colorado Nursery Co., Fort Collins, Colo.

Title Contest Winners.

Following are the winning suggestions in the Title Contest which started in the December 15 issue of Western Farm Life, and closed January 20:

First prize, "Hearts of Men," by Mavia Hollingsworth, Deer Trail, Colo.

Second prize, "The Rich Get Rich, and the Poor Get Children," by Kenneth Pickering, Salem, Utah; and Chas. Howell, Longmont, Colo. Two second prizes were paid, as two of the contestants tied for second place.

Third prize, "Selfishness vs. Benevolence," by Henry Schmidt, Del Norte, Colo.

This contest was decided by three disinterested judges, and Western Farm Life feels that each suggestion received its share of consideration. We wish to thank all who participated in this contest.

Dairying and Hog Raising

All letters regarding commercial and technical features of dairy farming and hog production promptly answered. Address all communications to Dairy Department, Western Farm Life, Denver, Colorado.

Better Sires Cause of Increased Milk Production.

A gain of 17 per cent in milk production and 20 per cent in butterfat production in daughters over their dams because of the use of a purebred bull is the striking result obtained in the New Windsor, Md., cow testing association which has a bull association as a subsidiary. The records of twenty-one cows were compared with the records of their twenty-one daughters after the latter had become mature cows. The average production of the dams for one year was 5,560 pounds of milk and 219 pounds of butterfat. The daughters averaged 6,523 pounds of milk and 263 pounds of butterfat, a gain over the mothers of 963 pounds of milk and 44 pounds of fat. In the association every one of the daughters sired by one of the three association bulls was better than her dam. One of the bulls produced an average improvement in his daughters of 1,414 pounds of milk and 62 pounds butterfat.

The worth of the purebred sires as an improver of the productive capacity of dairy cows has been measured in a number of localities where there are both cow-testing and bull associations. The United States Department of Agriculture has collected figures from a number of communities, but in the past it has been difficult to keep tab on the improvement that bulls have made in herds. The plan of the Dairy Division now is to get such figures, as far as possible, on cows owned by members in all of the 158 bull associations in the United States.

Some Feeds Taint the Milk.

It is a fact of common knowledge that some feeds influence the quality of the butter and of the milk. This is a very important item on a farm especially where these products are sold directly to the consumers. All moldy and ill smelling feed should be avoided, for not only the health of the animals is endangered, but the milk and butter is often disqualified. It will occur that even two or three weeks after one has stopped feeding the moldy feed, the taste or smell still taints the milk and butter. Silage, ensiled beet tops, cabbage, turnips, etc., if moldy or musty, will impart a bad taste to milk and butter. Dirty feed troughs or dirty feed buckets are also often cause of milk taints. The bad taints are sometimes not directly due to the feed itself, but in many cases the air of the stable is so tainted with the bad smell that it is absorbed by the milk.

Particular tastes are often caused by flowers and weeds as bitter flowers, wild onions, too much wet beet pulp, or the over-feeding of turnips or potatoes, etc. Rich feeding of linseed cake sometimes causes a linseed taste. However, carrots, good quality hay and clovers, oats and rice bran generally give a fine taste to milk and butter. Some of our feeds have a decided effect on the hardness of butter. Hard butter, difficult to streak out, is often caused by the hay from sour pastures (sour soils), by ripe green fodder, over-cured hay and straw.

Rutabagas, turnips, mangels and the leaves of the same; sugar beets, pulp, potatoes, pea meal, plampit cakes and meal, cocoanut and cotton-seed cake or meal also give a rather hard or solid butter. Soft or streaky butter often finds its causes in the feeding of oat and corn meal, wheat middlings and shorts, rice polish, bran, etc.

It hardly needs to be said that when these feeds are fed in reasonable combination with other feeds there is no danger of taints. However, it often occurs that one has an abundance of one of these feeds, or that one particular group of feeds can be purchased at a low price, and in such cases one is liable to feed the stock too much of one kind.

A few years ago a dairyman here fed to his cattle 3 to 4 pounds of peanut cake daily. It was not long till he got a letter from the creamery asking the reason of the shrinkage in fat content of the milk. (The fat went from 3.45 down to 2.60.) At the same time some cows showed sickness and a veterinarian was called. The doctor did not find the cause at once, but after a week or so he had a piece of the peanut cake tested for purity and the cause was soon determined, for this peanut cake contained a high amount of poisonous ricinis meal. It is a rather dangerous practice to feed so much of a material the properties of which are, as yet, little known.—L. S. Dijkstra, Vreeland, Holland.

Keeping Pigs in Condition.

What is the cause of hogs craving and eating chicken droppings? The sows have pigs around one month old. I feed them soaked corn. They have access to ashes from stove and sour milk every other day, and also good cured cane fodder.—J. C., Lincoln County, Colo.

It is not unusual for hogs to follow chickens and it will do them no harm. A hog is not very choice in the matter of its food, but if provided with a balanced ration will not eat anything that is harmful.

It has been asserted by various experienced feeders of hogs that a mixture of charcoal, ashes, lime, salt, sulphur, and copperas kept where the hogs can eat it will tend to prevent worm infestation. There is no positive experimental evidence, however, in support of the idea that such a mixture will prevent worm infestation, and it is of value therefore as a source of mineral matter in the diet, and perhaps an appetizer and tonic, rather than as a worm preventive. A balanced ration may furnish all the necessary feed nutrients, yet the system of the hog craves mineral matter. The mineral matter is not under control, and in order to make sure that the hogs have an abundant supply, free access should be given to a mineral mixture. The following is a formula for such a mixture:

Charcoal	1 bushel
Hardwood ashes	1 bushel
Salt	8 pounds
Air slaked lime	4 pounds
Sulphur	4 pounds
Pulverized copperas	2 pounds

Mix the lime, salt, and sulphur thoroughly and then mix with the charcoal and ashes. Dissolve the copperas in 1 quart of hot water and sprinkle the solution over the whole mass, mixing it thoroughly. Keep some of this mixture in a box before the hogs at all times, or place in a self-feeder.

In dealing with the diseases of hogs, preventive measures must be most relied upon. The animals must be given dry and well ventilated quarters, which must be kept clean. Contrary to common belief, hogs have some habits which raise them above other domestic animals from the standpoint of cleanliness. For example, unless compelled to do so, a hog will not sleep in its own filth. If a part of the floor of the pen is raised and kept well bedded with straw, while the rest is not, all excrement will be left on the unbedded portion of the floor and the bed itself will be always clean.

In addition to cleanliness close attention should be given to the feed, so that nothing may be fed that will convey the germs of disease, especially tuberculosis, to the herd. If the hogs are fed milk in any form obtained from cows kept upon the same farm, the cows should be subjected to the tuberculin test. If they run with the dairy cattle of the farm a tuberculin test of all the cattle is none the less desirable. Animals dead from any disease should not be fed to the hogs until the meat has been made safe by cooking. Skim milk or refuse from a public creamery should not be fed to hogs until it has been thoroughly sterilized.

Feeding and drinking places should be clean and the water supply pure. Unless the origin is known to be uncontaminated and there has been no possibility of infection during its course, hogs should not be allowed access to any stream. Wallows should be drained out and kept filled up as much as possible. At least once a month the quarters should be disinfected with air-slaked lime or a 5 per cent solution of crude carbolic acid. These precautions will be found valuable aids in the destruction of the various animal parasites, as well as a protection from some more serious troubles.—Animal Husbandry Department, U. S. D. A.

Boulder County Tester's Report.

High cow for December in the Boulder County Cow Testing Association goes to Lady Ismay DeKol, belonging to Marcus Harper. She made 1,959 lbs. of milk and 70.8 lbs. of fat. Mr. Harper also has high herd with eleven cows averaging 1,794.2 lbs. of milk and 61.9 lbs. of fat. In the November report of the Western Division, Mr. Harper's herd ranks fourth for herds under fifteen cows. Out of 20,209 cows tested in the seven western states during November, Lady Ismay DeKol, owned by Mr. Harper, ranked sixteenth.

J. J. Kalberer of Broomfield has high herd of over fifteen, with fifteen cows having an average of 914 lbs. milk and 34.3 lbs. of fat. The honor list this month contains two herds with a 40-lb. average. N. Anderson of Niwot has eight cows with an average of 1,083 lbs. of milk and 41.1 lbs. of fat. C. A. Rossiter of Broomfield has five cows with an average of 1,029 lbs. of milk and 40.2 of fat.

The quality book for December contains 35 cows. Besides high cow, Mr. Harper has ten registered Holsteins in the list—Cloe, 1,696 lbs. of milk, 70.2 of fat; Pink, 1,913 of milk, 67.9 of fat; Rose, 1,674 of milk, 59.8 of fat; Grace, 2,021 of milk, 65.3 of fat; One, 1,262 of milk, 48.7 of fat; Pontiac, 1,584 of milk, 52.6 of fat; Queen, 1,361 of milk, 50.8 of fat; Mayberry, 1,665 of milk, 58.6 of fat; Mary, 1,891 of milk, 69.7 of fat; Konigen, 1,711 of milk, 67.5 of fat. Gabe Lucas has a Guernsey making 1,057 of milk and 59.1 of fat. S. D. Buster has two Holsteins and a Shorthorn—Spot, with 1,432 lbs. of milk, 44.3 of fat; Jenny, with 977 of milk, 42.0 of fat, and Red, with 1,141 of milk, 52.4 of fat. E. L. Buster has two Holsteins—Molly, 1,122 of milk, 43.7 of fat; Eve, 1,398 of milk, 54.5 of fat. J. D. Steele has a Jersey called Betsey, with 970 of milk, 41.7 of fat.

N. Anderson has five registered Holsteins, Johanna, 1,110 lbs. of milk, 40.7 of fat; Skylark, 1,221 of milk, 46.3 of fat; Pride, 1,758 of milk, 61.5 of fat; Pauline, 1,159 of milk, 43.4 of fat; Leda, 1,085 of milk, 54.1 of fat. C. A. Rossiter has two registered Holsteins—Rigtje, 1,429 of milk, 48.5 of fat; Beauty, 1,144 of milk, 48.0 of fat. J. J. Kalberer has two registered Holsteins—Aggie with 1,384 of milk, 62.1 of fat, and Karen, with 1,299 of milk, 58.4 of fat. C. W. Hake has two Holsteins—Whitie, 1,339 of milk, 50.8 of fat; Bess, 1,163 of milk, 43.0 of fat. F. A. Barhite has a registered Holstein with 1,060 of milk, 44.5 of fat. Geo. Yeager has two Holsteins—Mayja, with 1,209 of milk, 41.1 of fat, and Bixler, with 1,135 of milk, 45.5 of fat. Harry Yeager has two Holsteins—Mable, with 1,091 of milk, 49.1 of fat; Albina, with 1,618 of milk and 47.6 of fat. Willard Forsyth has a registered Holstein named Gerben with 1,079 of milk and 41.0 lbs. of fat.—S. G. McLain, Tester.

Collegiate Judging Contest.

The college students' judging contest held January 14, the opening day of the National Western Stock Show, was won by Kansas Agricultural College team, with Colorado a close second. Kansas won with 4,287 points out of a possible 5,000, Colorado Agricultural College taking second place with 4,204 points. Nebraska was third, with a score of 4,015 points, and Wyoming University team fourth, with 3,618 points.

Kansas was awarded the challenge cup offered by the Stock Show Association, having won the collegiate judging contest for three successive years.

In individual ratings Colorado Agricultural College's team member, L. K. Crowe, was highest, having 920 points out of a possible 1,000. The Colorado state team takes the additional honor of obtaining the highest rating in the judging of breeding cattle. Kansas won first in fat stock judging.

The Colorado team was composed of E. L. Scott, J. A. Reade, F. E. McFarland, A. W. Hawkins, R. R. Franke and L. K. Crowe. Prof. R. F. Keiffer of the Animal Husbandry department trained the young men. The Kansas team was composed of C. B. Roberts, A. D. Weber, J. J. Moxley, C. B. Quigley and J. S. Stewart.

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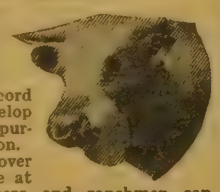

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Just one bull of serviceable age is left for sale in our herd. His dam made 15 pounds of butter as a yearling and will be tested for year's work this fall. She is a wonderful milker and the daughter of a 4-year-old with a year record of 25,208 pounds of milk and 878 pounds of butter, while the granddam of the bull's dam milked 108 pounds of milk in one day and 3,100 in 30 days. Two direct generations of 100 pound cows back of him. He is a good individual, mostly white, and sired by Denver Sir Segis, a 30-pound son of our senior herd sire, Johan Duchess De Kol Lad. What will this bull be worth to some good breeder?
Sanborn Meadows Holsteins.
MRS. R. G. DOUGLAS,
Rush P. O., Colo.

4 Registered Holstein Bulls
FOR SALE—One 3-year-old; three 2-year olds. Three are direct descendants of Pontiac Korndyke 25982, and the fourth carries Dirkie, DeKol, Aaggie and Nemea strains. For further information address
THE NILES FARMS,
706 Kittredge Bldg. Denver, Colo.

We have bred hundreds of prize-winning and high-producing Holstein cows, including
Tilly Alcartra
We can supply you with that same line of breeding. Write
McKAY BROS., Caddoa, Colo.

WALLIE FARM REGISTERED HOLSTEINS,
4800 S. Penn, Denver. W. G. Foster, Owner
Home of "Colorado Count," whose 29 sisters broke 140 world's records.
Bulls of Serviceable Age for Sale
Excellent individuals. World's record blood. Terms to responsible buyers. Wallie Farm bulls are guaranteed.

Buy a Calf Out of This Herd
Twenty cows in this herd on an official seven-day test averaged 446.13 lbs. of milk and 20.19 lbs. of butter.
COLORADO STATE HOME,
2305 S. Wash. St. Denver, Colo.

D'ARCY HOLSTEINS
Have made good at home and they will do the same for you. A few choice calves can be purchased now at a price that can't help but make you money. Write
NORMAN R. D'ARCY
Parker, Colo.

PRODUCTION
TYPE
We offer you a wonderful amount of these Holstein qualities—and from a clean herd. Bull calves from fine record dams. Pahgre Valley Ranch, Loesch Bros., Montrose, Colo.
SIZE
BREEDING

Arthur Waechter's Poland China Sale.

On Wednesday, February 15, Arthur Waechter will hold a Poland China bred sow sale at Yuma, Colo. Mr. Waechter is offering 50 tried sows, fall and spring gilts, and also four boars. Mr. Waechter has one of the outstanding Poland China herds of eastern Colorado. Some of the very best blood lines are represented. In speaking of his sales offerings, Mr. Waechter says: "We are selling some of the best we ever produced in our 24 years of breeding business. We have put out some real herd headers and producing matrons that have won in Nebraska state fairs and other shows. Will have about 50 head bred sows, seven tried; eighteen fall of 1920 gilts, and the rest spring gilts, bred to five of the best boars that we were able to find. First one is Beaumont Buster, a grandson of Giant Buster; 2nd, Orange Gerstdale, a grandson of Gerstdale Jones and Mammoth Gianttss 13th. Both these boars are yearlings of the up-to-date type. Beaumont Buster winning first and grand champion at our fair. 3rd, Western Ranger, a son of C-2 Ranger, the largest boar of the breed. This boar will be heard from in the future. 4th, B. V. Buster, the topplest pig I have seen this fall and winter. , 5th, Orange Prospect 2d, a son of Orange Prospect, the boar that stood second next to the Designer in 1919 at the Nebraska State fair. With the sows of the up-to-date type and breeding that we have, mated to these boars, we think that there is a great opportunity for the breeder for next year's show in the offspring of this offering."
We would suggest to those of our readers who are interested in Poland Chinas to write him for sale catalog.

STOCK SHOW NOTES.

Gleason & Blazer, Kiowa, Colo., with a herd of six Shorthorns, won seven ribbons. With Lady Duchess they won second in the junior heifer calf class.

C. H. Mather, Longmont, Colo., was at the show with a herd of nine Poland Chinas.

A. D. McGillvray, Boulder, Colo., won first in the aged sow and the junior yearling sow classes, and won a total of seven ribbons.

W. G. Foster, Englewood, Colo., showed thirteen Holstein Friesians at the National Western.

The Bonvue Farms Company, with Kirklevington King, the grand champion winner at the Chicago International at the head of their herd, showed thirteen milking Shorthorns; won five firsts, three seconds, two thirds, with additional ribbons lower down, making a total of twelve.

Tegtmeyer & Son had the largest exhibit in the Milking Shorthorn division at the show. They showed seventeen head and won five firsts, two seconds and two thirds, and a total of twelve ribbons.

The State Industrial School at Golden showed ten animals in the Milking Shorthorn division. They won a total of nine ribbons.

Seventeen Milking Shorthorns were exhibited by the Pine Valley Dairy and Farms Company, with which they won two firsts, seven seconds and five thirds. their entire winnings being represented by eighteen ribbons. In speaking of this year's show, Seeley G. Rose, manager, said: "One of the most noticeable developments of the show in the last few years is shown in the Milking Shorthorn division. Five years ago, when I first exhibited the Pine Valley show herd, there were all told only seven Milking Shorthorn shown. This year there were seventy head.

Pugh J. Mortimer of Fowler, Colo., was at the show with two fine Duroc Jerseys.

Five head of Poland Chinas were shown this year by Parsons & Holmes of Denver, who are fairly new in the hog business but with the good foundation stock of the Colorado Chief strain they expect to make good in the future.
James Gibson, Morrison, Colo., won reserve grand champion in the Holstein division with Prince Veeman Korndyke Clare.

Mr. Eleck Baldwin, Dickens, Neb., brought sixteen head Poland Chinas to the Denver show. He reports sales of two bred gilts to be shipped to Hillrose and Ordway, Colo. He had a very fine short junior yearling sow, weighing over 750 pounds, injured in transit. This fine animal no doubt would have been in the championship class. It may be of interest to the Poland China breeders to know that Mr. Baldwin was the man who started Bob Broad of the Agricultural College on his road to success with good foundation stock.

Mr. George Wm. Fuhrmann, Kersey, Colo., showed nine Berkshire hogs at the show this year, winning eight ribbons, five of which were first and second prizes. He has some fine June boars for sale and attention is called to his ad in this issue.

One of the surprises of the Denver show was the large number of winnings carried away by the Abst Stock Farm of Columbus, Neb. Their fine line of Durocs is headed by The Hit, a boar by Great Orion Sensation, as the head of their herd. He took senior and grand champion and first as a senior yearling. Their aged sow took first in her class and was also made grand champion. Their other winnings included two junior champions, nine first and four second prizes.

Miss Laura Richardson of Yuma, Colo., sent an aged Duroc sow to the Denver show this year and won second prize.

A. A. Blach, Yuma, Colo., had a fine group of Sensation Durocs at the show, winning third prize on junior yearling sow. Mr. Blach is a new exhibitor, but has good foundation stock and is in line for a better showing. He is having a bred sow sale on February 14 at his ranch.

Mr. C. F. Gauss of Littleton, Colo., had twelve Durocs in the show, winning second and third prize on June pigs. Mr. Gauss is re-entering the hog business and he thinks he will make it his permanent business. He has Defender, Cherry King and Sensation breeding.

One of the pioneers, Mr. J. W. Brauer of Colorado Springs, Colo., won first on his aged boar Colorado Chief Sensation. This was the same animal that he showed last year, being the largest junior yearling of any breed in 1921 at Denver. This hog has been a persistent winner, having won first in his class in 1920.

Mr. C. F. Burke, manager of the Blue Ribbon Live Stock Co., reported the sale of a junior boar pig for $100, which is to be shipped to Kansas. This boar was sired by Orion Real Sensation, out of Lulu Long Enough. Five other boars were sold by Mr. Burke, all of which are to be shipped to Colorado breeders. The Blue Ribbon herd of Durocs made a very good showing, winning many first and purple ribbons at the show.

The Range View Stock Farm of Henderson, Colo., reported the sale of three bred gilts to Laurence Collens of Golden, Colo., and one boar to Mr. C. F. Gauss of Littleton, Colo. The Range View Stock Farm is adding to their Duroc herd a daughter of Great Orion Sensation. Their winnings included first in class over all Colorado exhibits on junior sow pigs, as well as first in Colorado on the boar Great Orion Sensation Again.

Mr. C. F. Bratt of Arapahoe, Neb., had a fine herd of Hampshire hops at the show. He has sold one open and one bred gilt to be shipped to Lincoln, Neb. He will hold a bred sow sale on February 20. See announcement in this issue.

Mr. George H. Frink of Fort Lupton, Colo., succeeded in getting placed well in the Hampshire winnings, having carried away two grand championships, three champions, three reserve champions, seven firsts, five seconds, three thirds and one fifth. Mr. Frink sold his grand champion sow to J. L. Slack of Holyoke, Colo., as foundation stock. A pair of pigs were also sold to W. Byron Robinson of Greenland, Colo.

As usual, Mr. A. M. McClenahan of Greeley, Colo., exhibited his fine herd of Jersey stock at the show, winning the sweepstake prize for the best exhibit of dairy cattle in the show for three consecutive years, entitling him to the Challenge Trophy, which is a silver cup. His other winnings consisted of eight purple ribbons, ten firsts and five seconds. One of his cows produced 870 pounds in a test this year.

Mr. H. D. Parker of Greeley, Colo., had eleven head of fine Guernseys at the show and succeeded in winning twenty ribbons. Mr. Parker reports that sales are slow, as most buyers are looking for cheaper animals than they have at this time. Greater winnings might have been secured by the Parker herd had they clipped their cattle before showing them in the ring.

Mrs. R. G. Douglas of Rush, Colo., had four head of choice Holsteins at the show. Two of these were on exhibit by request from the Show Association, including the world's record 2-year-old heifer and state record 3-year-old heifer. Mrs. Douglas' cattle were not exhibited in the show ring.

A splendid showing was made by Mr. J. B. Benedict of Denver, Colo., with his eleven head of Milking Shorthorns. His winnings included twelve first prizes, two junior champions, one reserve champion, one grand champion over any age. Mr. Benedict reports the sale of two bulls to Mr. H. E. Van Syckle, of Glenwood Springs, and one bull to Mr. McGregor at Estes Park. A complete list of the prizes won by the Wyldemere Farm Milking Shorthorns appears in their announcement in this paper.

Hog Show Awards.

(Continued from Page 15.)

Senior and Grand Champion Boar—G. H. Frink.
Junior Champion Boar—G. W. Banker.
Aged Sows—(5 shown)—1 and 2, G. H. Frink; 3, Ed Davis; 4, C. S. Bratt & Son.
Senior Yearling Sows—(3 shown)—1 and 3, C. S. Bratt & Son; 2, Ed Davis.
Junior Yearling Sows—(4 shown)—1 and 3, C. S. Bratt & Son; 2, Ed Davis.
Senior Sow Pigs—(4 shown)—1, 2 and 4, C. S. Bratt & Son; 3, G. W. Banker.
Junior Sow Pigs—(6 shown)—1 and 5, G. H. Frink; 2 and 4, C. S. Bratt; 3, G. W. Banker.
Sow Pigs Born in June, 1921—(4 shown)—1 and 2, C. S. Bratt & Son; 3, G. H. Frink.
Senior Champion Sow—G. H. Frink.
Junior Champion Sow—G. H. Frink.
Grand Champion Sow—G. H. Frink.
Aged Herds—(3 shown)—1, G. H. Frink; 2 and 3, C. S. Bratt & Son.
Aged Herds Bred by Exhibitor—(1 shown)—1, C. S. Bratt & Son.
Young Herds—(3 shown)—1 and 3, C. S. Bratt & Son; 2, G. H. Frink.
Young Herds Bred by Exhibitor—(3 shown)—1 and 2, C. S. Bratt & Son; 3, G. H. Frink.
Get of Sire—(3 shown)—1 and 3, C. S. Bratt & Son; 2, G. H. Frink.
Produce of Sow—(3 shown)—1 and 3, C. S. Bratt & Son; 2, G. H. Frink.

BERKSHIRE.

Judge—W. J. Carmichael, Chicago, Ill.
Exhibitors—Ray E. Cannon, Arvada; D. S. Davis, Denver; Geo. Fuhrman, Kersey; C. W. Henry, Greeley; J. H. & Myrtle Parsons, Denver.
Aged Boars—(2 shown)—1, C. W. Henry; 2, D. S. Davis.
Senior Yearling Boars—No entries.
Junior Yearling Boars—(1 shown)—1, Geo. Fuhrman.
Senior Boar Pigs—(4 shown)—1 and 3, C. W. Henry; 2 and 4, D. S. Davis.
Junior Boar Pigs—No entries.
Boar Pigs Born in June, 1921—(4 shown)—1 and 2, Geo. Fuhrman; 3, C. W. Henry.
Aged Sows—(4 shown)—1, J. H. & Myrtle Parsons; 2 and 3, C. W. Henry.
Senior Yearling Sows—(2 shown)—1 and 2, C. W. Henry.
Junior Yearling Sows—(5 shown)—1 and 3, C. W. Henry; 2, Roy E. Cannon.
Senior Sow Pigs—(6 shown)—1, 2 and 3, C. W. Henry; 4 and 5, D. S. Davis.
Junior Sow Pigs—(4 shown)—1, J. H. and Myrtle Parsons; 2 and 3, C. W. Henry.
Sow Pigs Born in June, 1921—(4 shown)—1 and 2, Geo. Fuhrman; 3, D. S. Davis.
Senior Champion Boar—C. W. Henry.
Junior Champion Boar—C. W. Henry.
Grand Champion Boar—C. W. Henry.
Senior Champion Sow—C. W. Henry.
Junior Champion Sow—C. W. Henry.
Grand Champion Sow—C. W. Henry.
Aged Herds—(1 shown)—1, C. W. Henry.
Aged Herds Bred by Exhibitor—(1 shown)—1, C. W. Henry.
Young Herds—(4 shown)—1 and 2, C. W. Henry; 3, D. S. Davis.
Young Herds Bred by Exhibitor—(4 shown)—1 and 2, C. W. Henry; 3, D. S. Davis.
Get of Sire—(3 shown)—1, C. W. Henry; 2, D. S. Davis; 3, Geo. Fuhrman.
Produce of Sow—(4 shown)—1, C. W. Henry; 2, D. S. Davis; 3, Geo. Fuhrman.

CARLOT SWINE.

Carload Fat Hogs, 175 to 200 Pounds—1, Geo. J. German, Cozad, Neb. (Poland China); 2, O. J. Brownfield, Cozad, Neb. (Hampshire); 3, J. Mevich, Lewellen, Nebr. (Berkshire).
Carload Fat Hogs, 220 to 240 Pounds—1, Otis H. Crow & Sons, Rocky Ford (Duroc Jersey); 2, O. J. Brownfield, Cozad, Neb. (Hampshire); 3, Boulder County Boys' and Grils' Pig Club (Duroc Jersey).
Carload Fat Hogs, 260 to 300 Pounds—1, J. H. Williamson, Beatrice, Neb. (Hampshire); 2, Geo. J. German, Cozad, Neb. (Poland China); 3, John Mevich, Lewellen, Neb. (Berkshire).
Grand Champion Load Fat Hogs—J. H. Williamson, Beatrice, Neb
Reserve Champion Load Fat Hogs—Otis H. Crow & Sons, Rocky Ford, Colo.

HAMPSHIRE HOGS.

FOUR YEARS THE BEST

Meat Type Hampshires

The International Livestock Show is the test of hog producing power. Hampshires have won the grand championship in this test four years in succession—1918, 1919, 1920, 1921—in the hands of average farmers. No experts needed to make Hampshires win.

Hampshires are the greatest of all forage hogs, making the highest-priced pork out of the cheapest feeds on the farm. Active, vigorous and healthy, they raise exceptionally large litters. At the International they have shown, almost without exception, the heaviest spring pigs of any breed, carrying always the heavy, high killing, lean meat type. For free Hampshire information and for names of breeders in your neighborhood, address

Amer. Hampshire Swine Record Ass'n, E. C. Stone, Secy., Dep. 7, Peoria, Ill.

CLOVERDALE RANCH HAMPSHIRE HOGS

EARLY MATURING MARKET TOPPERS

Pay Dividends on the Investment. Only a small percentage of our fall litters were saved for breeding purposes, but they are extra good ones—well grown out. Inquiry for Hampshires is good and sales are increasing every week. Our hogs have been shipped into four different Rocky Mountain states this winter. Have only a few gilts left that are bred for spring farrow, and one or two choice young boars. Write us your wants today. Prompt delivery and satisfaction guaranteed.

N. E. MOSHER & SON, HUGO, COLO.

PUREBRED HAMPSHIRES

My Hampshire herd is the same blood lines that made such remarkable records at the Des Moines, Ia., and Lincoln, Neb., state fairs in 1919. I am now offering sows and gilts bred for March and April farrow. Also some choice September pigs. Write me.

P. P. CEDER, GENOA, NEB.

Hampshires We have a choice lot of gilts bred for April and May farrow, priced at $40 each. We also have a fine herd of young tried sows weighing from 300 to 500 lbs., bred for March and April farrow, which we are going to sell below their actual value. They are bred to grand champion boars and we are pricing them from $45 to $60. Everything immuned. Satisfaction guaranteed. Scudder Bros., Doniphan, Nebr.

DeKalb's King 160th

BRED SOW SALE

At our farm, ARAPAHOE, NEB., FEBRUARY 20, 1922. Write for catalogue and other information.

C. S. BRATT & SON, Arapahoe, Neb.

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PRIZE WINNERS

Shorthorns, Herefords, Guernseys, Holsteins, Jerseys, Poland Chinas, Duroc Jerseys, Including Grand Champion Poland China Boar.

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Herefords ***Percherons***
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Breeding stock of all ages for sale. Individual or carload lots.

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SHORTHORNS.

SUNNYSIDE ROBERT

SHORTHORNS

We have for sale cows, and cows with calves by side, and heifers. Scotch and Scotch tops. A few choice bulls left. We make 'em make good. Write us.

GLEASON & BLAZER, Kiowa, Colo

SHORTHORN BULL FOR SALE.

ADVOCATES URR, roan, calved Sept., 1919. Bred by H. F. Harmon: Sire, Imp. Advocates Model 647679. Dam, Maid Marian 138615; sire, Gladstone 239313. Dam, Merry Maid 2d 29528; dam, Nonpareil Victor 2d 258255. Dam, Merry Maid 726; sire, March Knight 188105. Dam, Imp. Winsome Maid; sire, Marchison 192330.

H. F. HARMON, BOULDER, COLO.

We raise ***SHORTHORNS***

For Both Beef and Milk.

"The Farmer's Cow"

We have never used a nurse cow on our place.

The CORNFORTH LIVESTOCK Co.
ELBERT, COLO.

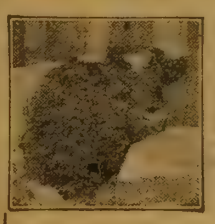
SHADELAND STOCK FARM

BREEDERS OF

SHORTHORN CATTLE

Herd headed by Maxwalton Rustler, a grandson of Avondale.

Chester White hogs of best breeding stock for sale. Also Ringlet Barred Rock eggs for hatching. G. W. BALL & SONS, Pierce, Colo.



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GUERNSEYS.

GUERNSEYS

Sired by the Grand Champion bull at the 1921 National Western and State Fair, both male and female, are for sale. Write

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GREELEY, COLO.

DUROCS. DUROCS.

Big-Type Poland China

Bred Sow Sale

Wednesday, Feb. 15, 1922

Yuma Fair Grounds, Yuma, Colo.

4 BOARS

with the best of Big Type Breeding

48 Tried SOWS, Fall and Spring GILTS 48

MANY ATTRACTIONS IN THESE SOWS, BRED TO FIVE OF THE BREED'S MOST POPULAR BOARS.

HERD BOARS.

BEAUMONT BUSTER 116290—
A Giant Buster and Miller's Best breeding. A grand individual winning 1st and sweepstakes. His sires were prize winners.

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A Gerstdale Jones, Big Orange, Big Bob bred hog. What more do you want?

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By C-2 Ranger out of a Big Timm bred dam. A wonderful boar.

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A Giant Buster Equal. Big Timm and Long Jumbo Pig. A pig with many favorites.

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A Smooth Prospect Pig Orange youngster with remarkable scale and finish.

This array of breeding should interest you. Positively this is the best offering we have ever made at any of our 14 sales in the 24 years we have been handling hogs. This is your opportunity to buy eastern blood at home and save express. **Write for catalog giving full information.**

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Blue Ribbon Live Stock Co.
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Livestock Auctioneer and Duroc Breeder.

DUROCS

Gilts bred to my champion boars and June pigs from my great yearling "Golden Chief" and a daughter of the World's Grand Champion, Great Orion Sensation, can be seen at the Stock Show.

J. W. Brauer,
22 Lorraine St., Colorado Springs, Colo.

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Can be won by you. We are offering September pigs, full brothers and sisters of those that made the sensational winnings at Nebraska and Colorado fairs. Let us tell you about them.

KINGSLEY HERDS, Minden, Nebr.

POLAND CHINAS.

Mather's Big-Type Polands

sold to breeders in four states this year are giving satisfaction.

BUY WEANLING PIGS

at prices that will surprise you.

C. J. Mather, Longmont, Colo.

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THE MARKET LOOKS PROMISING. RESTOCK NOW WITH

HEREFORDS

Some choice heifer calves and a few bulls of Beau Santos and Bright Stanway breeding are for sale.

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BIG TYPE

Poland China Pigs

SIRED BY F. B's LONG BOB.

White Leghorn Eggs, $2 per setting, $7 per 100; and Mammoth Bronze Turkeys.

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Cows from Polled Plato, herd headed by POLLED SUCCESS A 3rd. Young bulls and heifers for sale.

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MAX GIANT BOB Poland China Pigs

from our big-type prize-winning sows will please you—and the price is in accord with present conditions. Write us.

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Don't Send A Single Penny

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$2.39

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A sturdy work shoe with heavy, long wearing upper stock, double leather insoles and guaranteed counters. Made especially for the modern farmer, with uppers tanned to resist acids. Guaranteed to please or your money back. Don't send one cent. Pay postman when you get the shoes.

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English or Blucher Style

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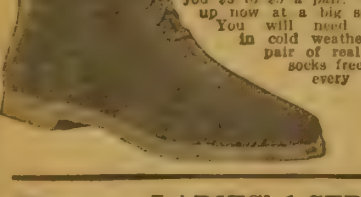

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Fine quality barnyard proof hi-cuts, solid leather soles and insoles. Wonderfully made throughout. Remarkable bargains at our prices.

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No. 462
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$1.75 Plus postage on arrival

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Splendid, sturdy school shoes for husky growing boys. Buy these shoes for your boys and get your full money's worth in wear. Neat appearing, gunmetal leather, as good for Sunday as everyday. Money refunded if not satisfactory.

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Prize Letters From Our Poultry Raisers—Page 4

Western Farm Life

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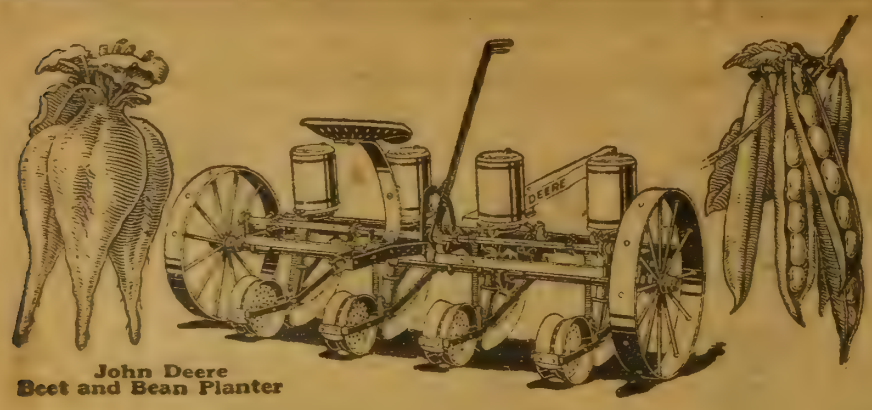

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To E. R. Parsons:

I am an Englishman, born at Blackheath, who met you at the Dry Farming congress held at Colorado Springs in 1911-12. Although a preacher at that time, I was sent as a delegate from the town of Flagler. I always believed in taking an interest in the material as well as the spiritual interests of the community in which I lived. I had seen the advantage of the summer fallow and a regular system of rotation in crops when living in Ontario, Canada. I enjoyed all that I heard at that remarkable congress. I have been reading your articles in Western Farm Life off and on ever since that time.

You will be glad to hear that the summer fallow system is becoming increasingly popular in this section. Mr. J. C. Andersen, a Dane, was the first to set the pace, and he and his sons have had fine success year after year. They have seldom run below 20 bushels of wheat and often over 30. My son-in-law, Mr. Andersen's son, had 33 bushels on summer fallowed land this summer, and along side that a field averaged only 8 bushels on a field of volunteer wheat.

Albert Martin, 8 miles north of here (Genoa, Colo.), has practiced summer fallowing for three years now. Last year he averaged 40 bushels on eighty acres of summer fallowed land, with a disked crop averaging 10 bushels on the same farm the same season.

I sometimes think that a law prohibiting wheat on any but summer fallowed land would be a benefit to eastern Colorado. There is no money in a poor crop, however put in, and there is a profit in a good crop, even when the price is low. I strongly believe that agitation for better farming would put more money in farmers' pockets than the present vicious and vindictive agitation against the other fellow, whoever he may happen to be. Good farmers made money in eastern Canada years ago. Poor farmers failed to make money. It was the same in Connecticut when I lived there, the same in Delaware, the same in Oklahoma, and it is the same here. Good farmers make money practically every year; poor farmers only occasionally, when price and seasons happen to be favorable. Good systems of marketing are good, but they will never offset the difference between 30 bushels of wheat and 10 bushels of wheat.

We have had just the same results with trees. Albert Martin summer fallowed for trees seven years ago, and has never had a weed or a blade of grass in his grove since. His Carolina poplars are now 20 feet high. When digging a cellar for his new house, he found moisture 5 feet down and a tree root 22 feet from the nearest tree.

With the best of good wishes for your faithful and continuous pounding on right lines.—Edward P. Owen, Editor, Genoa (Colo.) Sentinel.

The Meaning of "Bloc."

The word Bloc is French. It has the meaning of our word, block. When used in regard to legislative bodies, it refers to a group of members having common interests, who are organized to act and vote as one unit in securing desired legislation. Such members usually sit together in one section of the assembly. The term "bloc" is applied to them in the same sense as we use the English equivalent when we speak of a block of seats in a theater or grandstand.

Blocs are more common in European legislative assemblies than in American. In most European countries, voting is not along party lines. Candidates are put forth and supported by people having common economic or religious beliefs.

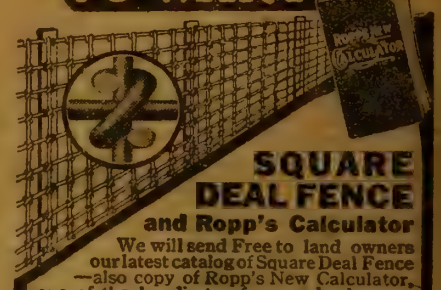
In Germany, for example, before the war, the Reichstag was composed of three divisions or blocs. The Conservatives, or property-holding class, sat at the right of the presiding officer. The Social Democrats, or laboring class, sat on the left. In the center were the members of the Catholic body, known as the Center Bloc, or party. Similar divisions existed in France and England.—Alfred R. Westfall, Colorado Agricultural College.

Am sending you my renewal for two years to the best farmers' paper I have ever read. I wish you would send me that little book, Rapp's Farmers' Reckoner.—James E. Windsor, Parker, Colo.

Florine: "I won't marry a man who won't look me straight in the eye."

Chlorine: "Then wear 'em longer, dearie."

2 THINGS YOU WANT



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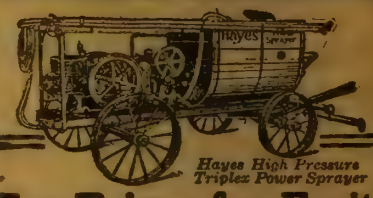

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Western Farm Life

A Western Magazine for Western Farmers and Stockmen

VOL. XXIV. DENVER, COLORADO, FEBRUARY 15, 1922. No. 4.

A Sure and Steady Income From Diversified Farming

By George C. Wheeler.

These purebred Holstein calves have been raised at the Plains Substation on a diet of skimmed milk, ground corn and barley, hay, silage and dry fodder.

At Cheyenne Wells in the eastern part of Colorado on the Union Pacific railroad, is found a typical example of diversified farming as it has been worked out here and there all over the great plains area. This 160-acre farm which adjoins the townsite is known as the Plains Substation farm of Colorado and is operated by J. W. Adams. It has been developed more strongly along dairy lines than the average successful diversified farm of this territory. Little or no grain is sold from this farm, in fact, Mr. Adams has bought practically all the corn and barley which he is feeding to his milking herd this winter. All his own corn went into the four pit silos which are a most essential part of his equipment.

Major Income From Butterfat.

The major part of the income from this farm is from the sale of butterfat, although there are several sidelines which have returned very fair incomes in proportion to the investment. I asked Mr. Adams if there was any money in milking cows at the present price of butterfat. His reply was that figuring the feed at market prices and his labor at prevailing rates there was not. However, in considering that much of the feed going into the production of milk could not be marketed at all in any other way, it must be admitted that he has found a market for this feed and is selling it at a fair price along with some of his own labor each day of the year. The price of butterfat had kept up well through the winter and only recently had seriously slumped to the present level of about 22 cents a pound at his shipping station.

To obtain this steady income from dairy cows under plains conditions it is first necessary to grow the feed crops required by the cows and young stock. This Mr. Adams has learned to do in his fifteen years of experience in Eastern Colorado. First and foremost is corn for the silos. By following the most approved dry land methods for storing and conserving moisture he is able to produce a silage crop every year. If conditions are reasonably favorable in the spring and summer he gets more silage from corn than from kafir. If after light rainfall in the early summer excessively hot and dry weather prevails in the latter part of the summer kafir comes to the front and outyields corn. This season the silos are filled with corn that yielded about six tons to the acre, containing probably 12 bushels of grain to the acre. For dry forage Mr. Adams has adopted the practice of drilling together in the lister rows Sudan grass, kafir, milo and orange cane, finding that using this mixture insures a good stand and the mixed forage cures more quickly when bound with a binder and shocked than feed from any one crop grown alone. He had several large stacks of feed about the barn, enough to provide a reserve to carry into next year, a wise precaution always in livestock farming under plains conditions. There is nothing more disastrous to the livestock farmer than to run short of feed and have to sacrifice stock by forcing it on the market.

Cannot Do Without Silos.

Two 12-foot pit silos and two 10-foot, all 30 feet deep, are enclosed in the cow barn with a partition and a sliding door separating them from the cow stalls. There are stanchions for 23 cows and storage for grain and some rough feed in the cow section of the building. A swinging derrick which can let down a car into any one of the silos is operated by a hand windlass. The car is on wheels and is run down the alley between the cows to distribute the silage. A litter carrier running on a track behind the cows makes cleaning the barn an easy task. Except in stormy weather, however, the cows are in the barn only for milking and long enough to clean up their grain and silage. Water is supplied in a big tank, and in cold weather a fire of cobs is started in the tank heater so the water will be at a proper temperature. Milk cows will not do well if forced to drink ice water.

At the time of my visit Mr. Adams was feeding the milk cows about 60 pounds of silage daily. They were not cleaning up this amount, however, and what they left was carried out each evening and fed to the young dry stock in the yard. The milk cows, of course, picked out the grain and the best of the silage. Corn and barley ground together, equal parts, constitute the grain ration, each cow getting about a gallon daily. They are not being fed for maximum production. The grain ration should contain some high protein concentrate as cottonseed cake or meal or linseed oil, but the high freight rates make these feeds almost prohibitive in price. The total daily grain cost of the twenty cows now being milked probably does not exceed 75 cents a day. The milk yield is from 35 to 38 gallons daily, which even at present butterfat prices means about $2.00 a day. There is no big money in milking these cows, but it comes every day and then there are various side lines which add to the returns.

Hens Profitable Sideline.

A flock of 100 Rhode Island Red hens do their bit, returning as much as $350 a year gross income. Then there is the garden. As much as $200 has come from the sale of garden truck to the folks in town who think it impossible to grow garden products under plains conditions. One year 80 gallons of strawberries were picked. Mr. Adams says it can be done and does it. To help out his garden he takes advantage of the run-off from a road and adds considerable water to the soil in this way. It requires patience and perseverance to overcome the difficulties, but it pays. It is no small item to have plenty of vegetables for home consumption.

The steers are fattened and butchered at from 18 months to 2 years of age. Mr. Adams sells the meat by the quarter, contracting it before he butchers a steer, getting at the present time 7 cents a pound for the forequarters and 11 cents for the hindquarters. He says his customers seem to find beef from these dairy bred steers very satisfactory.

Hogs also are a profitable sideline. Two or three purebred Duroc Jersey brood sows are kept, producing two litters a year. They have the run of the yards and save all the waste grain from the cattle. They also make good use of the skim milk which is one of the best supplements of corn, barley or the sorghum grains, superior even to tankage or meat meal.

A single registered Holstein cow and calf bought ten years ago for $130 is the one maternal ancestor of the whole purebred herd of 50 animals. There are now only five grades remaining in the herd. Five purebred bulls have been used. All the bull calves have been sold and the cull females. The herd might have been built up more rapidly by a few additional purchases, but a single well-selected cow can soon mother a good working herd. Mr. Adams says his biggest mistake was in not getting a better cow in the beginning.

Raising calves in a dairy herd is an art in itself. A dairy farmer cannot make a permanent success of the business until he masters this detail. The baby calf removed from its mother must be treated as a baby. Mr. Adams is a success in this branch of dairying as is evidenced by the fine group of calves shown in the cut on this page. He lets the calves nurse their mothers at least a week, but does not let them run together. The cow is partially milked and the calf helps himself to what remains. Keeping them separated in this way it is not difficult to wean them from each other. Mr. Adams finds that it pays to give the calves a good start before teaching them to drink from the pail. He has no difficulty in teaching them to drink. Two rows of stanchions are placed in a warm adobe calf barn and each calf is fed in a bucket separately. As soon as they are through with their milk they go to troughs where they find ground corn and barley. The milk is fed warm directly from the separator. "Be careful not to overfeed," said Mr. Adams, "and be absolutely cleanly in every respect in feeding and handling your calves."

Equipment Not Expensive.

Proper equipment is necessary in dairying, but it need not be expensive. The adobe barn is ideal for sheltering milk cows. Mr. Adams has become an expert on this type of construction. It can be used all over the plains area. The principle item of cost is labor, and when a farmer does the work himself he usually leaves that out of consideration. The actual cost of the barn and milk room illustrated on this page did not exceed $600. The milk room contains a feed cooker in which 40 or 50 gallons of water can be kept hot. A 3½-horse gasoline engine belted to a line shaft supplies power for the separator, milking machine and other small machinery. Mrs. Adams now does the family washing in this room, using a machine belted to the line shaft. At first she was rather skeptical, fearing that she would be in trouble constantly with starting the engine and other details of operating such machinery. These troubles did not materialize. The engine and the milking machine also relieved Mrs. Adams of the necessity of helping out in milking, as she had been compelled to do before this (Turn to Page 13)

The adobe building of type of this cow barn and milk room ideal for purpose and cost little. Mr. Adams prefers making adobe into blocks and laying them in mortar of same material.

Farm Poultry Producers Tell of Their Successes

LETTERS GIVE ACTUAL EXPERIENCES IN THIS PROFITABLE SIDE LINE

WHEN the head of the house finds that the money to pay the grocery bills and perhaps buy the clothes for the children as well as their school books comes from the sale of poultry and eggs, he usually admits that poultry on the farm pays. This is the condition on many a farm in the Denver trade territory as is evidenced by the information given in the poultry letters submitted by our readers in response to our cash prize offer.

Despite the success so many have obtained in poultry production, and the favorable climatic conditions, this industry has not been given the attention it deserves. Last year poultry and dairy products held up in price through the disastrous slump which struck other farm products and have been the last to show a decline.

Poultry production on the farms of this section offers exceptional opportunities as a part of the business of every farm. Preliminary reports from the 1920 census show a good healthy increase in poultry production, but with $5,000,000 worth of poultry and eggs shipped into Colorado alone annually to supply local demand, no one need fear to expand his poultry business.

In proportion to the investment no other farm industry will yield as large an income or a more sure one. Even the most skeptical farmer who has failed to help his wife with her poultry work would be compelled to accept this statement if he could read the many letters sent in by Western Farm Life readers in response to our prize letter offer. These letters give, not theories, but the results of actual experience in this most profitable farm side line and oftentimes obtained despite serious handicaps.

Flock Makes $300 a Year.

FIRST PRIZE LETTER.

My hens have cleared above expense for feed, more than $100 since November 1, 1921, and with the sale of baby chicks and eggs for the year should go well over the $300 mark. When I began to raise poultry for profit, like most farm women, I had numerous obstacles to overcome. Being a mother of small children—sometimes young babies—their care, together with care of milk, butter, and garden, made chicken raising a heavy tax upon my time and strength.

To convince my husband that poultry could be made to pay and pay well, I kept a book account. If you meet some opposition from the head of the house in getting proper co-operation, try this. At the end of the year invite your husband to help you add up your accounts and see if his protests do not lose their vigor and finally cease altogether when you ask for more feed and equipment, or help about the houses. Before long he will take as much pride in the poultry as you do.

When we moved here four years ago to a rented farm I shipped three dozen Barred Rock hens, just ordinary fowls. The first year little was done to fix the houses. I purchased a 60-egg incubator to hatch early chickens and raised those hatched without hens, placing them in boxes kept indoors for first two or three weeks, then transferring them to outdoor pens 4 feet square, built 3 feet high with one end and part of the top made weatherproof with old tin roofing. The rest of the top was covered with poultry wire and an extra piece of tin was used to lay over wire when storms came. Under the protected portion I placed a fireless hover made of a box and discarded bedding.

In these pens I could place 40 to 50 chickens. Later I had larger pens built that would accommodate 75 chicks to broiler size, placing them in these pens with fireless hovers as soon as they could be left outdoors. A little opening in the front allowed the youngsters to run in and out when weather permitted. These pens are easily made from any old materials lying about and can be moved from place to place. I found I could raise more and better chickens than most hens do early in the season, though later I hatched and brooded some chicks with hens.

The feeding was simple, but perhaps more important than feed is keeping the baby chicks dry and comfortably warm the first few weeks. The first year or two I made corn bread of the infertile eggs, with sour milk and soda, crumbled it and fed dry, together with a baby chick scratch feed, in a litter of alfalfa leaves mixed with sand, at first on inch or so deep and later several inches in depth. They will eat much of this litter, so it must be renewed as often as it becomes damp and dirty. Give each feed alternately several times a day.

Later I began the use of a baby chick starting food to be moistened with milk. I like this so well I have discontinued the task of baking bread. The infertile eggs I boil hard and mix with bread crumbs, bran or oatmeal and feed a little once a day. I also keep sour milk and water in fountains and bran in little boxes from the first. In about ten days I begin to reduce the starting feeds and add ground oats, corn meal, and shorts, each equal parts, to the bran. This mash is kept before them in home-made feeders all the time and the scratch food fed in litter several times a day, just a little at a time. Keep your chicks busy and comfortable and they will grow. At about four weeks I discontinue the baby chick scratch food and begin feeding grain composed of 2 parts cracked corn, 1 part of wheat and 1 of oats, and begin to feed a little of mash moistened with sour milk once a day, preferably after their evening feed of grain, which is fed about 4 o'clock. In eight weeks you can begin to sell broilers and in twelve weeks all in the lot can be sold.

The first year I kept no book account but know my flock had yielded a profit.

The second year I had about 75 hens and purchased good purebred cockerels, also two 130-egg incubators and two hot-water lamp-heated brooders. We fixed some cheap windows in the south side of an old building in which to place the brooders. I kept the earliest chicks six weeks in these brooders and later ones four weeks before placing them outdoors in my pens with fireless hovers.

I also added turkeys to my poultry. From January 1, 1918 to 1919, my sales amounted to $545.30, including sale of turkeys, which was $78.64. Feed and equipment cost $280.72, leaving me a net return of $264.58. I never have kept any account of eggs and poultry used on the table, which in a family of seven amounts to considerable in a year's time.

The third year I continued along the same lines, my sales reaching a total of $567.71, including turkeys, which brought $144, while feed and other poultry expenditures amounted to $265.65, leaving me a balance of $302.06 for my work.

At the beginning of the year 1921 I decided to change my breed to S. C. White Leghorns and also increase my capacity, so purchased a larger incubator and a colony brooder at a cost of $86. By January 1, 1922, my sales totaled $713.36; turkeys selling for $169.50, while cost of feed and new equipment including new brooder and incubator came to $382.33, which left me a net profit of $331.03, despite the extra expense for hatching eggs and baby chicks.

To begin this year I have 160 purebred S. C. White Leghorn pullets, and some additional houses fixed from useless sheds. All houses are covered with roofing and made weatherproof and I now have sufficient equipment to double my flock and sell baby chicks I cannot raise.

I have discontinued turkey raising as the magpies' fondness for eggs and young poults and the disposition of turkeys to wander to neighboring fields, makes too much work and trouble. I believe I can make as much and do it easier by raising more chickens for egg production. The cockerels sold for broilers will pay for raising the pullets when they have plenty of range.

Three years ago I sold part of my young chickens when they weighed about a pound at a fixed price to parties who bought them to finish for home frys. Sold at this age before they have consumed much feed, they bring a good and quick profit. Other poultry I sold to our local dealers and the eggs at the store. This winter we have taken our eggs to a creamery which pays 2c to 3c premium for clean, large, white eggs.

There is no royal road to poultry profits. You cannot feed well and regularly for a week, then neglect your flock for a day or two. Especially is this true with baby chicks. A few hours' neglect may cost you all your profit. Watch your flock quietly a few moments each day. It is a poor poultry keeper who can not detect a sick fowl or anything wrong in the flock and remove the ailing one or remedy the trouble. Be alert and always looking for culls. Weed them out each month in the year. Do not attempt to raise a weakling or crippled chick and as they grow older mark the runty, slow feathering ones for market. Cull again in the fall when ready to house. Take hold of each pullet and cull each light weight, poor bird for the fattening pen. Again mark the ones last to begin to lay so you will not be apt to breed from the slow maturing stock or any fowl that has been sick.

There are no poultry secrets unless it is work and watchfulness. Poultry journals and farm papers are full of reliable information as to their feed and care and anyone with the earnest desire to make poultry pay can do so.—Mrs. Harry E. Langridge, Longmont, Colo.

Small Farm Flock Makes Big Profit.

SECOND PRIZE LETTER.

We find our chickens pay a larger percentage of profit for the money invested than any other industry on the ranch. For the year 1921 my ninety hens returned an average net profit of $2.88 a piece. The following statement summarizes the results for the year:

520 doz. eggs sold to store	$108.00	
156 doz. eggs used at home	32.31	
56 spring chickens sold.	82.49	
61 spring chickens used at home	35.40	
20 hens sold	15.00	
60 hens, increase in flock	36.00	
Total		$259.20
Expense—		
Setting eggs	$ 3.25	
Bran and oyster shell	14.00	
Powder and spray	2.00	
		$19.25
Net profit		$239.95

Before coming on the farm here in 1917 I had kept a small flock in town, always making some profit. The first few years we were here I did not do much with poultry, as we had small crops and were so busy with building. We began the year 1921 with ninety Rhode Island Red hens and five roosters, housed in an open-front chicken house 24x14 feet, one-third of which was partitioned off and used for turkeys. The house had glass in part of the openings and burlap in the remainder. It was fitted with roosts, dropping boards and nests, had cement foundation and dirt floor, with plenty of litter. During the year the hens produced 713 dozen eggs, 520 dozen of which were sold in the local store, 156 dozen were used as food in the home, and 37 dozen were hatched.

Not having room (Turn to Page 17)

Our Poultry Contest Prize Winners

MORE than forty letters came to Western Farm Life in response to our prize offer for letters from our readers on how they make money with poultry. The purpose of this offer was to stimulate increased interest in poultry production and obtain for our readers the practical experience of those who have made a success of this big little business.

Letters have been received from all sections of Colorado, from Nebraska, Wyoming, Idaho, Montana, Utah and New Mexico. Considering the high merit of practically all the letters submitted it has been no easy task to select the three entitled to the cash prizes in accordance with the conditions outlined in the contest announcement.

The names and addresses of the prize winners follow:

First prize, $5—Mrs. Harry E. Langridge, Longmont, Colo.
Second prize, $3—Mrs. E. K. Fowler, Cheyenne Wells, Colo.
Third prize, $2—Mrs. Maude Hanson, La Salle, Colo.

Names of writers of other letters worthy of use and for which we have space will be given honorable mention in later issues.

The Hens That Lay Are the Hens That Pay

W. E. Vaplon.

WITH all the confidence of more than a score of years of experience and observation, I maintain that the poultry game offers a good profit on the investment, and am certain that the business will always yield substantial dividends, if for no other reason than that the many who go into the business on a big scale are doomed to failure. A friend in California, writing about the "chicken business," says: "I tell you, it is a big business in this country, but so many green hands try to make a go of it and get in too big before they know anything about it." There's a whole big poultry sermon in that sentence, which agrees with what the writer has always contended, that he who splurges, jumping into too deep water before learning to swim, is almost sure to fail, while he who has the patience, business acumen and good sense to grow into the business can and usually does succeed.

I think I have made many people, who have come to me complaining about their trials and losses, happy over the thought of the very troubles to be encountered in the poultry business by an observation something like this: "The best thing for the poultry men, especially for the farmer, who is, after all, the biggest and most successful poultryman we have, is the fact that only half the eggs hatch, that one-half of the chicks die, that half the remainder are cockerels, that half the pullets are profitless, that hens lay off a hundred days, that the egg basket remains empty during the winter months, that 10 per cent of the hens die when they should be at work, that would-be poultry kings seldom attain the throne. If all the eggs hatched, and all the chicks lived, and all were pullets, and all laid 300 eggs a year and got busy at four months of age, this old world long ago would have been buried under 27 feet of eggs and feathers, and we would have been smothered under the blanket. All this may be a good thing for the industrious poultrymen and farmers who are of the right metal to overcome and succeed "in spite of," and who do not expect to get rich over night, and who are satisfied with a reasonable return.

The prize letters and records will do more to convince (Turn to Page 19)

What Is the Future Prospect for Land Values?

LAND AND RENTS MUST COME DOWN, OR FARM PRODUCTS GO UP

Gilbert Gusler.

About Things That Affect Your Pocketbook

WHEN I asked Mr. Gusler what he would like to write about that would be of interest and tangible value to readers of Western Farm Life, he replied, "About things that affect their pocketbooks." I hired him.

This is the first of his series of articles. You will like it. You will like his other articles. Here are some of the subjects that Mr. Gusler will write about:

Are prices going higher or lower?
The outlook for the dairy business.
What actually has happened to farming, and what the future may bring.

I have read all of these articles and re-read them. They are fine, reliable, interesting and valuable. I know that you will appreciate each one. They will appear in early issues of Western Farm Life.—Publisher.

POSSIBLY before and certainly ever since Abraham and Lot found it necessary to divide the land to keep their herdsmen from quarreling, Lot taking the plain of Jordan and Abraham the land of Canaan, there has been a land problem. In each passing century it has become more acute. Many of the greatest events in human history, wars, immigrations and political struggles, have been based on a land problem.

In the United States one of our chief and difficulties is that of valuation. This has been particularly true in the last twenty years, since land values per acre have quadrupled in that period. Farmers who owned or purchased land during this interval have had an income from farming much higher than it would have been if limited to the sale of products grown on the farm.

The accompanying chart gives a picture of the history of land values during the last two decades. The census of 1910 found them to be a little more than twice as high as ten years before, and estimates made since by the Department of Agriculture show that they practically doubled again from 1910 to 1920. The Census Bureau shows an advance of 74 per cent from 1910 to January 1, 1920.

The Story of the Past.

If the study be projected backward still further, it will be found that land values per acre in the United States as a whole did not change radically from Civil War times until the twentieth century began. The census figures for each decade are as follows:

CENSUS—	Value per acre of farm land and buildings
1850	$11.14
1860	16.32
1870	18.26
1880	19.02
1890	21.31
1900	19.81
1910	39.60
1920	69.38

Before 1900, land was considered a safe investment because of the stability of prices; but after values had been advancing steadily for several years, it was generally assumed that these advances would continue. Then land was prized as an investment not for the return in the form of rent, but because of the expectation of an increase in the value per acre.

This went along merrily enough until prices in some sections got so high about 1910 to 1915 that the average return in the form of rent amounted to about one-half the current interest rate on the market value of the land. Then it became more profitable to rent land than to own it, unless a continued increase in the value per acre were assured. But if the value rose higher, it was still more difficult to earn an adequate rate of interest. Also the increased return from higher land value could only be realized upon by selling the land itself. In short, it was not a very satisfactory deal for the working farmer.

Finally the war came along, bringing higher prices for farm products and eventually starting a land boom which carried land values up to a new pinnacle. Then the collapse in the prices of grain and livestock arrived, and average land prices are going through their first set-back in a quarter of a century.

What caused the advance in land values, especially that part of it which preceded the war period? Were the conditions temporary, or are they of a permanent character? The principal factor determining the value of land is its earning capacity. By capitalizing the profits in farming at the rate of interest which landowners are willing to accept, we arrive at a rough measure of what land is worth. Likewise, anything which makes farming more profitable tends to increase the price of land.

One reason why land values rose in the pre-war period was an advance in the prices of farm products. Following the crisis of 1893, prices of farm products remained low for several years, part of the time below cost of production; but about 1898 they began to go higher, and after two or three years these higher prices affected the value of land. Costs of production, aside from rent, also rose, but probably with less rapidity.

The records of the Department of Agriculture show an increase in the yield per acre of our leading farm crops during the past twenty-five years of about 15 per cent, or over one-half of 1 per cent a year. This is due largely to better methods of farming, crop rotations, higher yielding seed, and the use of varieties and crops adapted to local conditions.

With higher prices for farm products and larger yields per acre, naturally the crop values per acre rose. The chart shows that in the period from 1899 to 1909 crop values advanced an index figure of 57 to 101. Land advanced still more rapidly. Also in the next five years crop values changed but little, while land values kept on rising. Evidently other important factors were at work.

The rise in land values from 1916 to 1920 was due largely to the advance in crop values per acre, which, in turn, was due mostly to higher prices for farm products. It is a fairly well-established rule in industrial finance that, in case of a major rise in the price of a product, the value of the plant which produces it will increase about one-half or five-eighths as much as the price of the product. The actual selling price of the plant is influenced more by the price of the product than by the cost of reproduction. Land prices advanced relatively more than plant values would, because the supply of land is limited while the industrial plant can be duplicated.

Other Causes of Rising Prices.

This brings us to the second cause of rising land values during the past twenty-five years. Good plow land had nearly all passed into private hands by the end of the nineteenth century. Each census up to and including 1900 showed a big increase in the amount of tillable land, but the 1910 census and the 1920 census, so far as made public, show only small increases. And yet the improved land in farms in 1910 was only 25 per cent of the total land area of the country. Increases now mean, in most cases, the use of less desirable areas.

The population, especially the urban population, of the United States has been growing by natural increase and by immigration. This has meant a bigger demand for food and other products of the farm. The pressure of a growing population upon a fixed land supply inevitably advanced the price. As long as there was cheap public land, that in private hands was prevented from rising.

There are instances in which much of the increase in the value of the land has been due to investment of the profits and savings of the farmer in the construction of permanent improvements, such as barns, houses, granaries, fences, drainage systems, and to clearing the fields of stumps and stones. Taxes paid to build roads, school houses or other public improvement likewise become incorporated into land values for the best of reasons.

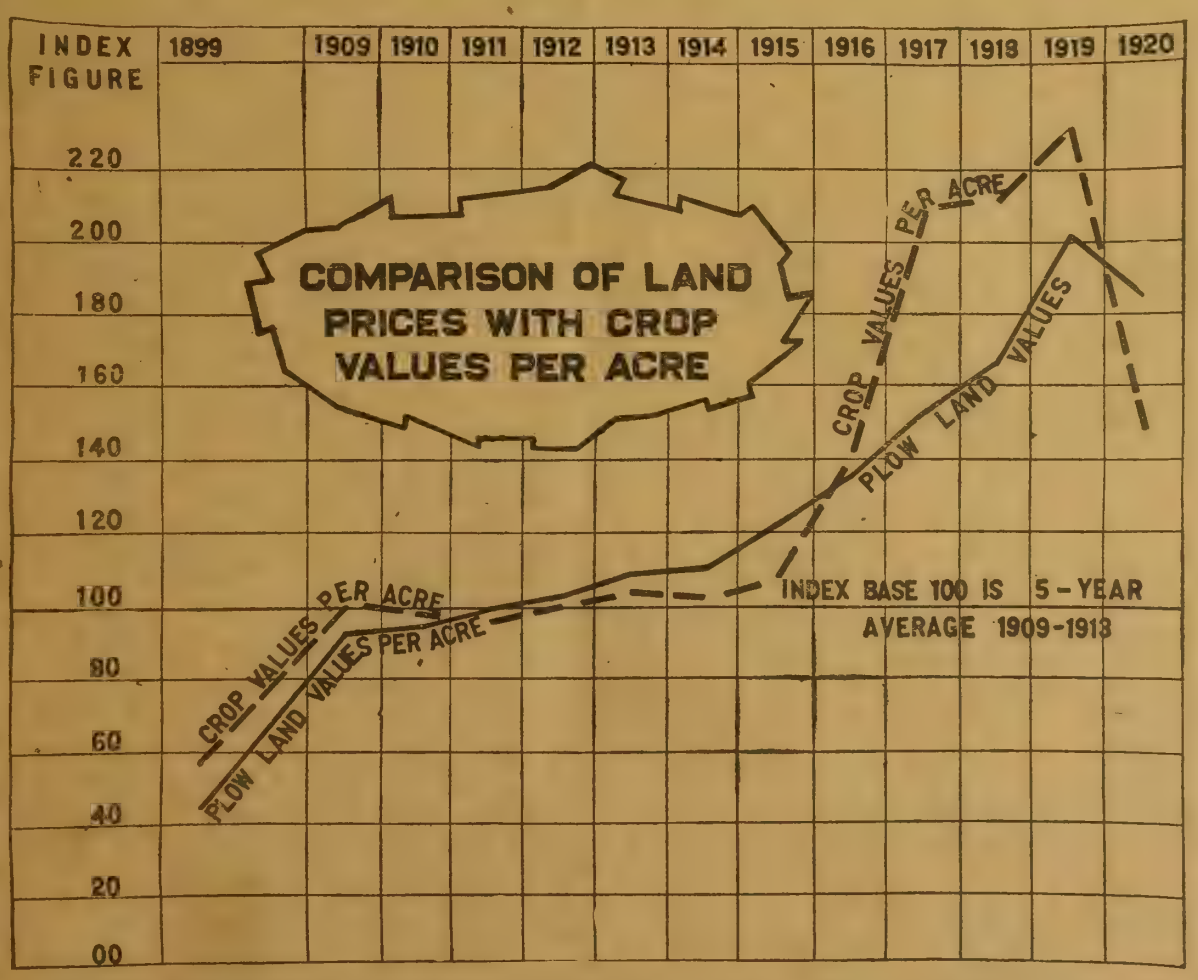
Lower interest rates during the early part of this century also tended to raise land values, and would have done so aside from any increase in the net profits per acre. Farmers and others who had saved money sought to invest it in land, and the competition to buy farms helped to put the price up.

Some other factors which have helped to make farming more profitable and eventually influenced land values are: More effective machinery, better livestock, better facilities for reaching markets through railroad extensions or otherwise, the development of new crops such as alfalfa, the use of silos, and improved business methods in marketing, such as producers' marketing organizations.

The extension of the telephone to the country, the rural mail delivery, the auto, and all the other developments of a quarter of a century which have made country life more attractive, have tended to enhance land values rather than depress them. Also the demand for country homes on the part of city people has been an important factor in raising land values in the vicinity of the large cities.

By the end of 1920 the land boom was over and the index figure for land prices had dropped from 202 to 184. The average value of all plow lands declined from $90.01 per acre at the end of 1919 to $83.78 at the end of 1920. Unofficial reports during 1921 point to a further decrease of 20 to 30 per cent since the Bureau of Crop Estimates gathered its

(Turn to Page 15.)



The index figures both for land prices and crop values per acre are those prepared by the U. S. Department of Agriculture. The average of the five years, 1909 to 1913, in each case is used as the basis of the index.

The land prices represent values at the end of the years indicated, while the crop values per acre are based on the December 1 prices.

Some of the things shown by the chart are:

1. In the period from 1899 to 1909 land values more than doubled or the index figures rose from 45 to 93. Crop values rose also, but not so sharply, the figures being 57 in 1899 and 101 in 1909.

2. From 1909 to 1915 crop values per acre rose slightly to 108, but land values moved up more rapidly, going from 93 to 123, or an advance of about 32 per cent.

3. Crop values advanced sharply in 1916 and again in 1917, remained about the same in 1918, but advanced still further in 1919, and reached an index figure of 232, compared with 108 in 1915. This is an increase of 2,115 per cent. Land values did not advance so far or so fast. The index reached 202 in 1919, an advance of 64 per cent over 1915.

4. By December, 1920, crop values per acre declined to 148. The land value index also fell, but much less sharply to 184. Crop values now are materially lower than on December 1, 1920, and unofficial reports indicate that land prices have sagged further since the government's estimate was made up.

5. Crop values and land prices are now out of adjustment. It is reasonable to expect that they must return to a relationship more like that prevailing from 1899 to 1915. This process is likely to take two or three years. Until it is completed land values will be relatively high compared with crop values, just as the reverse was true in 1917, 1918 and 1919. Whether it will come about primarily through an advance in crop values or a decline in land prices, it is impossible to say, but a combination of both movements seems probable.

Market Outlook for Farm and Ranch Products

EASIER MONEY, BETTER BUSINESS, MORE STABLE PRICES ARE PREDICTED

Edited by Glenn G. Hayes.

CATTLE market receipts decreased in the last few days and gave that division of the trade an opportunity to get on its feet. Beef consumption has not increased noticeably, but panicky sellers of half finished steers are less numerous. As the fat cattle market is showing more strength, those who were fearful have regained some confidence and always those who carry cattle for the spring market are of the "strong-handed" sort who refuse to let go during periods when the market is temporarily depressed. Young cattle able to make substantial growth are being held back as feed lots cannot be refilled at prices equal to those which some of the light killing steers are bringing. It is generally believed that the low point of the winter has been passed and that another month or two will bring substantially higher prices for finished steers.

No strictly prime cattle are arriving even at Chicago, but with the bulk of the supply composed of common and medium steers on the shortfed order, the limited number of good and choice steers is bringing a satisfactory premium and prices upon this sort have shown greatest improvement. Light steers are much more abundant than those with heavy weight, so that top prices most of the time are being paid for heavy cattle.

Broad Interest in Stock Cattle.

Commission house mails are freighted with inquiries as to prospective values upon stock cattle a month or two hence. Some heavy steers are going into feed lots, but the bulk of shipments countryward continue on the lightweight order, many of them evidently being intended to go on grass. With the fat cattle market doing a better stunt, values upon stockers and feeders have advanced slightly and there appears to be little prospect of a lower level during the rest of the winter and spring. In the southwest cattle have been advancing during the last five or six weeks, and owners of grass in Kansas also have raised their asking prices, so that business has been checked for the present. But few transactions will be closed during the next two or three weeks. Texas cattlemen are in no hurry to make contracts as long as prices maintain an upward course.

Hog Market Healthy.

Although the advance in hog prices gives the market a top-heavy appearance, the underlying conditions are healthy. Indications that hogs were being held back early in the season are contradicted by the volume of current receipts and by private estimates showing a decrease in the number of hogs on farms compared with a year ago. There is still a large supply to be marketed, however, and liberal receipts are in prospect for February, which may cause the market to lose some of its recent bloom.

Stocks of lard at the principal packing points in the Middle West increased only 11,000,000 pounds during January, and were 28,000,000 pounds on February 1, compared with 48,000,000 pounds a year ago. Hog meat stocks made the smallest gain for January in more than fifteen years. Eastern shippers during January took a smaller percentage of hogs than they absorbed in December, so that the showing cannot be accounted for fully on that basis. It is reported that eastern packers have accumulated liberal quantities of lard and cured meats as a result of heavy slaughter during the last three months and that they are visibly concerned over the disposal of this product. With both domestic and export demand in a flourishing state, they should not have difficulty finding a market.

Colorado Lambs Next.

Fed western lambs from cornbelt feed lots have constituted the bulk of the supply for a number of weeks, but Colorado lambs are now coming freely and the movement from that state is expected to reach heavy volume in the next two or three weeks. Large numbers are being forwarded from Denver direct to packers at Chicago and other slaughtering points. The total number of Coloradoes on feed is estimated at 900,000 head, compared with 1,450,000 head last year. Although most of them went into feedlots late in the season, receipts at Denver during January showed an increase of about 75 per cent over a year ago.

The $14 lamb has appeared several times at Chicago with partly finished stuff selling at only a moderate discount. The market appears top-heavy, but the Colorado supply usually is fed upon the market gradually and since it must furnish the bulk of receipts until June, no severe break is anticipated. Purchases of lambs for feeding or shearing at prevailing levels, however, are fraught with danger.

The Meat Supply.

Predictions that the meat supply would diminish during 1922 have made good thus far. In every class of livestock January receipts at the seven leading markets were the lightest for that month in more than five years. The following table tells the story:

Jan.—	Cattle	Hogs	Sheep
1922	784,000	2,399,000	914,000
1921	865,000	2,692,000	1,016,000
1920	1,099,000	3,158,000	949,000
1919	1,256,000	3,624,000	1,011,000
1918	1,048,000	2,720,000	948,000
1917	996,000	3,304,000	1,121,000

These markets are representative of the total supply for the entire country and show why the hog and lamb markets have been booming while reduced beef consumption explains the laggard behavior of the cattle market.

Europe Anxious for Wheat.

A profound change has taken place in the wheat market in the last 10 days. In the long period from the middle of September to the end of December, during which prices maintained a downward course most of the time, European buyers failed to provide for their requirements. There was widespread lack of confidence in the future stability of values and it is believed that propaganda was used to depress prices still further through reports that European needs were not large.

Stocks of cash wheat abroad declined to small proportions. Liverpool stocks, according to the latest reports, are only 760,000 bushels, compared with 6,900,000 bushels at this time a year ago. It was generally expected that Argentine and Australian wheat would come forward with unusual rapidity as soon as the harvest was completed. Thus far, however, non-European countries have been taking a large fraction of the shipments from Australia and clearances from the Argentine, which totaled 10,159,000 bushels during January, compared with 2,095,000 bushels in the same period a year ago, have largely gone to fill sales made a number of weeks ago. One foreign observer reports that Europe will need 8,000,000 bushels of wheat a week from North America for some time to come. European buyers finally have been forced to enter the market at a time when no wheat was pressing for sale in any country and prices have advanced rapidly. The most spectacular rise occurred in Argentine wheat. The North American market lagged at first, but eventually hard winter wheat was cheaper than either Argentine or Canadian wheat, deflecting export business in this direction and a rapid advance in our own market followed. In the last few days over 6,000,000 bushels of hard winter durum and Manitoba wheat have been sold abroad, and about 2,000,000 bushels of rye were sold from Baltimore.

Prices have advanced over 20 cents from the low point of the season and are now at the highest level since early October. Reactions may occur at any time, but it is believed that the underlying conditions are so strong that prices will advance much further in the coming months.

All statistical summaries now show that there is not much more than 50,000,000 bushels difference between the known import needs and the exportable surpluses of the various countries. This is a close adjustment of supply to demand and provides a balance so small that the outcome of the 1922 crop is a matter of great concern. Since both Europe and non-European countries have been taking more wheat than they were estimated to need early in the season, the adjustment may become still closer before the end of the crop year.

Crop Scares Near.

Within a month, growing weather may be experienced in the drouth-stricken sections of Kansas and Oklahoma, which will show up severe damage to new winter wheat as a result of the prolonged dry spell. In Western Kansas it is said that 50 per cent of the wheat is not showing above the ground. In Nebraska and some other sections, wheat fields are covered with ice and damage from this cause is feared. It is generally believed that average condition is no better at present than it was at the time of the last official report.

Corn Markets Still Deluged.

The movement of corn to terminal markets in January totaled 55,000,000 bushels and was the largest on record. The market has shown a waterlogged appearance at times, but the sharp advance in wheat prices carried the corn market along and prices are now the highest in several weeks, although daily arrivals are setting a new record. Export buying is still liberal, and clearances since November 1 have been about four times as large as in the same period a year ago. Private reports suggest extremely heavy farm reserves, although the rate of consumption on farms has been rapid as a result of profitable prices for livestock and livestock products. The disappearance of corn from primary markets into consumptive channels during the first quarter of the crop year amounted to 96,600,000 bushels, the largest for the corresponding period in the last dozen years.

The huge visible supply of oats is not fading away rapidly as receipts at primary markets are comparatively large in spite of private reports pointing to extremely light stocks on farms. The domestic demand has been rather slow. During the first half of the crop year the total disappearance of oats from primary markets into consumptive channels was 91,445,000 bushels. This is slightly larger than in the same period of last year, but shows a decrease of 40 per cent when compared with the average of the preceding four years. It is believed, however, that eastern distributors have allowed their stocks to become very small and that they will need large shipments before spring.

Cash Grain Markets.

The range of cash grain prices for the week ending February 3 was as follows:

Kansas City—Wheat: No. 3 red, $1.12@1.18; No. 4, $1.06@1.13; No. 2 hard, $1.12@1.33; No. 3, $1.10@1.30; No. 4, $1.05@1.25.

Corn—No. 2 mixed, 44@45c; No. 3, 44¼@44¾c; No. 2 yellow, 44½@45½c; No. 3, 44@45¼c; No. 2 white, 44½@45½c; No. 3, 44@45c.

Oats—No. 3 white, 36@37c; No. 4, 34½@35½c.

Rye—72@75c.

Barley—48½@50c.

Poor Hay Hard to Sell.

Hay markets remain irregular, light receipts serving to maintain prices at most points, but Kansas City has just received the largest run in a number of months and prices were reduced slightly. Low grades are relatively abundant and are difficult to move from distributing markets even at a big discount. Alfalfa hay remains at a high premium, with prairie hay most difficult to sell. Price fluctuations for the most part are traveling a narrow range.

Kansas City—Prairie upland No. 1, $9@11; No. 2, $7@9. Alfalfa, choice $22@24.50; No. 1, $19.50@22; stand-

(Turn to Page 20.)

What the Forecasters Say

THE professional forecasters who specialize in the prediction of business trends from economic cycles have had some hopeful things to say about the outlook for prices during 1922. Here are their comments:

Babson: "For the first time in two years we do not expect to see lower prices for farm products."

Brookmire: "The first half of 1922 may with considerable confidence be expected to witness a considerable rise in commodity prices. Because such favorable fundamental conditions as exist at the beginning of the year have never in the past been known to exhaust themselves within so short a time as would be measured by a movement up to the middle of 1922, we feel justified in stating further that the second half of the year will witness a further continuation of rising prices."

The Committee of Economic Research of Harvard University has this to say: "It appears probable that 1922 will be a year of easier money, better business, more stable prices, and higher profits than was 1921, and there is evidence also that the general movement of business and wholesale prices will be upward. There is no reason, however, to anticipate a boom in 1922."

These conclusions may prove to be erroneous, but they are based on thorough, impartial investigation of the factors which control price movements. Since farm prices were more thoroughly deflated than other groups, it is to be expected that they will rally more than these other groups under the influences that tend to raise the general price level.

Recent Range of Livestock Prices at Our Principal Markets.

Cattle—	Denver.	Kansas City.	Omaha.
Choice to prime heavy steers (1100 lb. up)	.....	$8.00@ 9.15	$7.75@9.00
Good heavy steers	.....	6.80@ 8.15	6.75@7.75
Medium heavy steers	$6.00@ 7.00	6.15@ 7.10	6.15@6.75
Common heavy steers	4.75@ 6.00	5.40@ 6.40	5.50@6.25
Choice and prime light steers (1100 lb. down)	.....	8.25@ 9.25	7.85@9.25
Good light steers	.....	6.85@ 8.25	7.00@7.85
Medium light steers	6.00@ 6.75	6.15@ 7.00	6.25@7.00
Common light steers	4.50@ 6.00	5.25@ 6.40	5.50@6.25
Common to choice butcher heifers	3.50@ 6.90	3.90@ 7.00	4.00@7.25
Common to choice butcher cows	3.25@ 5.50	3.60@ 5.40	3.50@5.65
Bologna and beef bulls	2.00@ 4.25	3.10@ 5.10	2.75@4.75
Medium to choice light veals	7.50@10.50	6.25@10.00	6.00@9.75
Common to choice heavy veals	5.50@ 7.00	4.00@ 7.75	4.00@7.25
Canners and cutters, cows and heifers	2.00@ 3.00	2.25@ 3.75	1.50@3.50
Canner Steers	.....	2.75@ 3.50	2.50@3.75
Common to choice feeders (1000 lb. up)	5.00@ 6.50	5.25@ 7.00	4.75@7.00
Common to choice feeders (750—1000 lb.)	4.50@ 6.65	5.25@ 7.00	4.75@7.50
Common to choice stocker steers	.....	4.35@ 6.90	4.50@7.25
Common to choice stocker cows and heifers	.....	3.25@ 5.50	3.25@5.25
Hogs—			
Top of Market	$ 9.15	9.10	9.10
Bulk of Sales	8.75@ 9.10	8.10@ 9.00	8.25@8.90
Heavy (250 lb. up)	8.50@ 8.80	7.90@ 8.90	8.25@8.85
Medium (200—250 lbs.)	8.75@ 9.10	8.35@ 9.10	8.10@9.00
Light (150—200 lb.)	8.85@ 9.15	8.00@ 9.10	8.60@9.00
Light lights (130—150 lbs.)	8.75@ 9.10	8.25@ 9.00	8.70@9.10
Smooth packing sows (200 lb. up)	6.75@ 7.50	6.75@ 7.25	7.00@8.00
Rough packing sows (200 lbs. up)	6.50@ 6.75	6.25@ 7.15	7.00@8.00
Medium to choice pigs (130 lb. down)	8.00@ 8.50	.....	.....
Stock pigs	.....	6.75@ 8.90	8.25@9.00

What Do You Know About the Art of Plowing

AVERAGE DEPTH SOIL IS STIRRED GOOD GAUGE OF CROP RETURNS

E. R. Parsons.

THE early history of mankind tells us little about agriculture. The Pithecanthropus or primitive man, dubbed by some the missing link, who lived several hundred thousand years ago, and his descendants, the cave man, carried clubs, not hoes, and lived off what animals they could kill and what wild fruit and roots they could find. It was not until after the stone age that some few rude agricultural implements seem to have been fashioned.

The first plows were wooden, being nothing more than a stout forked stick to which a branch of a tree or pole was attached by thongs of rawhide. The point of the fork acted as plowshare, and the plowman hung onto the beam. Another kind was the one-piece plow which consisted of a long fork and a short one. The former was a branch and the latter was cut from the body of the tree. The hitch was at the top of the short fork and the plowman held on to the long branch or beam in order to keep the point in the ground. These plows were operated with the help of oxen; but when animal power was scarce the whole family was sometimes commandeered to do the pulling. In some parts of Russia and the East even today it is said to be not an uncommon sight to see the women and elder children pulling the plow while the lord and master does the guiding. It was only a few years ago that the Canadian Government had to pass a law preventing certain Russian colonists from hitching their families to the plow.

Egyptians Were Best Farmers.

The Egyptians were among the best agriculturists of those days; but it is not until the time of the Romans that we hear much about plowing. Their plows were made partly of metal and did good work. It is a significant fact that during one of their wars the country ran short of feed. To meet this shortage the Roman senators put their heads together and ordered the farmers to plow deeper (supposedly 8 inches). The results were highly satisfactory. The Romans introduced their good plowing into Gaul and Britain besides parts of Europe and North Africa, Great Britain, France, Belgium, and Germany having obtained a good start in this direction have been slowly increasing their depth of plowing and now probably raise the biggest per acre crops in the world.

800 Bu. Potatoes on 20-inch Plowing.

It is a common thing in those countries to raise 800 bushels of potatoes per acre on land plowed 20 inches deep and highly fertilized. If we know the average depth of plowing in any particular country we can tell about what their crop yield is. The plowing is always a good gauge of agricultural efficiency. Russia is one of

One method of catching and holding winter and spring snowfall. Particularly valuable on soils where blowing is apt to occur.

the shallowest plowing countries in Europe. Ten bushels to the acre is a fair crop there, but it is usually nearer five or six, although in the Ukraine districts where the soil is exceedingly rich the average is somewhat higher. In our own country the record was held for years by the New England states in which many natural drawbacks to productiveness were overcome by deep plowing.

Heavy Crops on Battle Field.

The most remarkable plowing the world has ever seen was done by the Germans with their high explosives during the war. Whole districts in France were torn up and even men of their Department of Agriculture were afraid the soil was ruined. The summer following the end of the war much of this land was leveled and crops were being raised on it. A party was organized in Paris to make an excursion to these districts and make a report. When they arrived they found the red clover up to their necks and the leaves as big as a dollar, the sugar beets, wheat and barley were all of extraordinary size and appearance; there was nothing like it in all France.

The primitive idea of plowing and one which prevails even to this day is to scratch up enough dirt to cover the seed, but nevertheless plowing became deeper and deeper for the simple reason that it paid.

Why do we plow and then attempt to repack it or wait for it to settle and pack normally? Because when land is unplowed it is too solid to absorb and conserve moisture and raise crops; but when it is newly plowed it is too loose and over-aerated, and dries out too easily. The optimum condition is between these two. Land for grain crops, alfalfa, etc., should be more settled and packed than that for corn, sorghum and milo. If the dry farming rule of always plowing ahead of time in order to allow the soil to repack and absorb moisture is carried out, little artificial packing will be needed; but when this is demanded the big corrugated rollers of the western type are what is wanted to pack, crush the clods, and leave the surface in a fine, well mulched condition.

Many Reasons for Deep Plowing.

There are many reasons for good deep plowing on the dry farm. As all farmers know that roots of crops may go down into the subsoil as deep as ten feet; but here is the point, if the subsoil is not in good condition as regards moisture, the roots will not go into it at all and we are then trying to raise a crop on six or eight inches of soil which requires as many feet. There may even be lots of moisture in the subsoil; but if on account of shallow plowing the hard surface of the subsoil underneath the loose top dirt becomes dry the roots stop right there; therefore, the most advanced dry farmers plow from 8 to 10 or 12 inches in order to mulch the subsoil and take no chances.

We also plow deep to absorb a quick rainfall. If three or four inches of rain fall in a week a five- or six-inch plowed field cannot hold it all until it soaks in and it may run off, or, if it stays, it will be in pools puddling and injuring the surface tilth.

Another reason is that roots move down more quickly in plowed ground than they do in the subsoil. In ground plowed 10 inches deep alfalfa struck the subsoil in five weeks. At the same time the plants on 4-inch plowing went down only 5 inches. The alfalfa or any other crop with roots down in the soil at 10 inches depth is much safer from drouth than one whose roots reach only to a depth of five.

Best Part of Soil Is Top Foot.

Most of our crop plants have surface roots which feed in the plowed seed bed and also taproots which exploit the subsoil for moisture. The best part of our soil is the top foot on account of the humus from decaying grass roots and by deep plowing we create a favorable environment for these surface roots in this rich stratum of high fertility. Another good reason for deep plowing, especially when breaking sod, is to mix the top soil humus with a large amount of dirt and so conserve it from exidization by the atmosphere. This is particularly necessary in dry farming because we have to cultivate so much to conserve moisture, and it is evident that if the humus is allowed to remain in the top four or five inches it will soon become exhausted.

The best rule to follow on the dry farm is to plow in the fall for spring crops and in the spring for fall crops, thus allowing plenty of time for the land to settle and accumulate moisture. If spring plowing is used for spring crops then only those should be planted which do not need a very solid seed bed such as corn, sorghum, milo, Sudan grass, etc.; but even for these crops it is much better to plow in March than in May. Land plowed in the fall may sometimes after a wet winter and spring settle too much for corn and cane; yet fall plowing is otherwise good for all crops, because it conserves plenty of moisture, so when this is done the way we recommend for these crops is to plow in the fall and then list and plant in one operation across the plowing in the spring, for the listing has the necessary loosening effect on the soil.

When Better to List Than Plow.

When plowing is done in the fall it is usually left rough to catch all the snow possible during the winter, but as soon as the frost is out of the ground it should be harrowed, for then evaporation commences. In (Turn to Page 22)

Two Million Unhatched Chicks Die Each Year

AVOID LOSSES BY CAREFUL ATTENTION TO DETAILS OF INCUBATION

Paul C. Jamieson.

ABOUT six million eggs are placed under hens or in incubators each year in Colorado. We hatch only about four million chicks. Four million eggs are wasted and two million chicks die in the shell.

The reasons for this great loss are few and they can be remedied to a great extent. Too little attention is paid to the selection of breeding stock. Hens of the highest vitality should be selected for breeding pens. These pens should be headed by strong, vigorous, early maturing males. Hatching eggs should also be selected carefully. Medium-sized eggs are best. They should be uniform in shape. Exceptionally long, rounded or short eggs are objectionable. Strong-shelled eggs are very desirable.

Eggs for hatching ought to be collected at least three times daily. They should be placed in a well ventilated room with even and fairly warm temperature. Great loss results in keeping eggs too long before they are set. Eggs which will produce a 75 per cent hatch if set the day they are laid will produce only a 25 per cent hatch if kept three weeks. If it is necessary to keep eggs they should be turned daily.

A good incubator is fully as safe as a good hen. In selecting an incubator, one should find out what machines are giving best results in his community. The most economical size to use is the 240 to 300 egg machine. The incubator room should be well ventilated and free from drafts. In Colorado a well ventilated cellar is best. The room must be kept moist or the percentage of the hatch will be low because the air is too dry. The incubator lamp or stove should be adjusted carefully and an even temperature of 103 degrees secured before the eggs are put in. Turning the eggs twice daily is very important from the second to the eighteenth day. When the chicks hatch, keep them warm. Kill all weak and crippled ones at once.

If hens are used for hatching eggs, they must be free from lice and mites. The nests should be fairly shallow and often it is well to place moistened sod in the bottom of the nests with a layer of straw on top. The sod helps to regulate the moisture needed. Never use a nervous hen or one that is easily frightened.

Let us make it our aim to save as many baby chicks as possible this year. Colorado needs them. Our best markets are supplied largely with eggs shipped in from other states. Chicks do well here after they are hatched. Our job is to hatch them.

Mr. Jamison has told of the enormous losses in the eggs incubated each year. Here is how Mrs. Mable Davison of Las Animas county, Colorado, manages to reduce the percentage of loss as she told it in her poultry contest letter entitled, "How I Raise Chickens."—Editor's Note.

"My favorite system is incubator-hatched chicks, brooded by old hens. I shall give my experience which has spelled success for me. If you intend hatching chicks from an incubator this season for the first time, be quite sure you understand something of the work before you begin, unless you wish expensive experience.

"I always thoroughly clean and disinfect the incubator before putting in the eggs. I see that it is level and then fill the lamp, clean the burner, fill the water tank, light the well-cleaned lamp and adjust the damper. I use the best grade of oil which holds an even flame and does not smoke. If I want a strong heat, I cut the wick square across, or, if less heat is needed, I trim the wick rounding the corners, thereby securing a pointed flame and naturally less heat. When the temperature is running evenly, and not until then, I put in the eggs. This is done in the morning, thus giving me the whole day to see that everything is going well. The temperature will be slow in rising after putting in the cold eggs. If the temperature of the egg chamber should soar too high, do not get excited and rapidly roll the eggs round and round to (Turn to Page 22)

Western Farm Life

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G. C. Wheeler, Associate Editor.

With this issue, George C. Wheeler becomes associate editor of Western Farm Life. He takes up the duties of Alvin T. Steinel, who has been at the head of the editorial department for the past five years. Mr. Steinel, in addition to his regular editorial work, has contributed the Farmer Putnam letters that have been read with much interest by many. Mr. Steinel recently accepted a position with the extension department of Colorado Agricultural college, and February 1 assumed his new duties. The many warm friends that Mr. Steinel has made by personal contact, and thru Western Farm Life, will be pleased to know his new work is also along agricultural lines in Colorado, and that they will continue to profit by his knowledge of western conditions and his enthusiastic and untiring efforts to better agricultural conditions.

Mr. Wheeler comes to Western Farm Life after eight years of editorial work on the Kansas Farmer. He was born and reared on a Kansas farm and graduated from the Kansas State Agricultural college in 1895. Mr. Wheeler was connected with the animal husbandry and the extension departments of the agricultural college for ten years, going to Kansas Farmer in 1913.

During this period Mr. Wheeler spent practically his whole time for two years in Western Kansas discussing the problems of farming under plains conditions, and particularly urging the use of more and better livestock. As extension specialist in livestock production he discussed this and related topics in every county in the state and up to 1913 had been on every educational demonstration train operated on Kansas railroads in co-operation with the Kansas State Agricultural college.

In 1902 Mr. Wheeler directed the erection and filling of the first standard silo at the Kansas experiment station, and supervised the first silage feeding experiment. After going into the extension division he assisted in constructing silos in many sections of the state. At every opportunity he urged the adoption of co-operative methods in the improvement of livestock and general betterment of farming conditions. He is a member of the Grange and the Farmers' Union, and has been actively associated with a number of the livestock organizations of his native state. During the summer and fall of 1921 he made a number of addresses over the state in the interests of the "Purebred Sire" campaign conducted by the agricultural college and the United States Department of Agriculture, and assisted in promoting the organization of the U. S. Grain Growers, Inc., in the state.

Mr. Wheeler is a man of much ability, has a thorough knowledge of farming and writes a sound authoritative article. He has few equals in knowledge of livestock and knows how to hook it up with livestock farming in a logical and practical way. He is conscientious, energetic, and commands respect for himself, both in his writings and public speaking. His early farm and extension work coupled with his experience as editor of Kansas Farmer, have given him first-hand knowledge of agricultural conditions and practices that is so necessary for farm magazine work. Agricultural journalism is the work he loves and in which he feels at home. He is not a stranger to our leading stockmen, farmers, and agriculturists. His broad experience and wide acquaintance has fitted him well for his duties on Western Farm Life. With this introduction to our readers, we will let his editorial work and writings, in this and future issues, speak for him.

W. S. EDMISTON.

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The New Editor Greets You.

After reading what the publisher has said on this page about his new editor I find it a rather embarrassing matter to rise in my place and tell you how happy I am to come into the Western Farm Life family. It is with something of the feeling which the pancake must have when the syrup is poured on that I attempt to respond to his most kind introduction. Already I feel that you are going to meet me more than half way, and will accept me freely as a citizen of this great state and endeavor to aid me in my efforts to add my bit to the spreading of better agricultural practices and the establishing of a more satisfying farm life.

The first day I was in Colorado I was invited to attend a Farmers' Union social and soon found myself feeling as much at home as I could possibly have felt in a similar meeting in my native state. Any trepidation I might have had in coming to your state vanished as these folks gave me the glad hand with every evidence that I would be accepted for what I could do. I am taking this welcome as typical of what I will find elsewhere as I have opportunity to meet more of you face to face in similar meetings on your farms or in your homes.

It is my sincere purpose to serve you to the best of my ability through the columns of Western Farm Life. In every issue we shall endeavor to print helpful information which you can take and interpret in the light of your knowledge of your own conditions and use in working out your farm practices. There is no rule of thumb by which anyone can practice farming. No farm paper editor can tell you just how to farm. All he can hope to do is to present fundamental principles and facts and pass on the good things he finds farmers here and there have worked out and which may fit conditions on other farms. It is in this capacity that the new editor hopes to serve you. Nothing we can print has greater value than the actual experience of practical farmers. In this issue we are printing some of the most valuable information on farm poultry production we have ever printed, because the folks who are doing things with poultry have written of their methods and practices. Let us have more of this kind of co-operation.

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Educating the East.

Our Washington correspondent has given briefly the outstanding features of the agricultural conference which has been going on in Washington for the past few weeks. Do not fail to read this summary on page nine of this issue. Perhaps one of the greatest hindrances to farming as an industry receiving due consideration is simply ignorance and misunderstanding. No other great industry is so persistently and constantly misinterpreted in the news of the day as agriculture. Congressmen from industrial sections and the public generally have little conception of the difficulties under which farmers are laboring.

If this conference does nothing further than to get before the public a real conception of the situation it will have accomplished much that is worth while. And it is doing this, for never before has farming and its problems claimed so much space in the press of the East, even in high-class magazines. But it will do more, for already the results are becoming apparent in the different attitude of Congress and governmental agencies toward the claims of agriculture. Farmers themselves are being educated in the matter of co-operation and from now on can be expected to put up a more united front than ever in the past.

Sidelines Save the Day.

Sidelines in farm production have become an important factor in helping to tide over a period of financial embarrassment. The general farmer has been compelled to accept ruinously low prices for his crops, while his operating costs have declined little if any. A partial remedy exists in a greater dependence upon sidelines in farm production. The poultry, home fruit and vegetable gardens and other similar resources offer opportunities for adding to the income, or at least reducing the outgo, by supplying the family with a large portion of its food supply. Too often these sidelines have been neglected as beneath the notice of the real "he" farmer. Many a man has been convinced, almost against his will, of the importance of these sidelines by the results his wife has obtained with most meager equipment and often under serious handicaps.

Our poultry prize letter offer brought replies which reiterated over and over again the important place of poultry in tiding by the present period of low prices for general farm products. Such statements as "Have paid the taxes and grocery bills every year with my turkey and chicken money," "Can look my grocer straight in the eye, for we don't owe him a cent," "Our hens have kept us through the hard times," appeared over and over in these letters. A farmer whose wife had been unusually successful in meeting the family expenses facetiously remarked that as his wife now paid for the groceries, the childrens' clothes and their school books, he had decided that if he helped out a little bit so she could pay the taxes as well, he would be able to make some money farming.

We hope we are starting on the upgrade, but we are not out of the woods yet and farmers who have been overlooking the possibilities offered by the sidelines may well take a lesson from the results achieved by those who have been awake to their opportunities. The statement that if worst comes to worst the farmer will be the last to starve simply means that the farm family can provide itself with the necessities of life even after farming as a business becomes financially a failure.

Let us conserve, develop, utilize and capitalize to the utmost these more or less overlooked resources of our farms in the year ahead. Many will be most happily surprised at the importance to which these sidelines may attain if given reasonable consideration.

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Tractor Price Reduction.

Drastic price cuts on tractors have been made by at least two manufacturers of farm machinery. It may amount to a price war between rival concerns. One company is offering to throw in a plow or a power disk to tractor purchasers. Farmers can look with a considerable degree of satisfaction on this evidence that the manufacturers are beginning to realize the necessity of getting down to earth if they are to do any business with producers. No farmer need have any twinges of conscience as he takes advantage of these price cuts even if it does represent a sum less than the cost of production to the manufacturer. If the companies have made any profits in the past, and no one believes they have been operating at a loss, the profits have come from the pockets of farmer producers. It will require some such acceptance of losses to start many lines of business. The farmer is the ultimate market and until he is able to begin buying all business will remain at a standstill.

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New Home Department Editor.

In our Rural Household Department a new editor makes her bow in this issue. Miss Mary G. Collopy asks if she may come into our Western Farm Life family and already we feel that we are glad she is one of us. May the women of the homes co-operate with her in making her department of the paper ever helpful to the farm women who in such a real and true sense are helpmeets and partners of their husbands in carrying on the great industry of agriculture and in making the farm life all that it should be.

The purebred sire will transmit the good qualities of all of his purebred ancestors. The scrub sire may transmit the poor qualities of any of his nondescript ancestors.

Materials for spring orchard spraying will not be late in arriving if ordered now.

News of the Farm Bureaus

Dairying in Colorado.—The county farm bureaus in several sections of the state are taking an active part in getting the dairying industry well established in the counties and in improving dairy stock and dairying conditions. Dairying is now recognized as more stable than the other farm activities. From Saguache county comes the assertion that "Dairying is now and always has been the foundation of agriculture." H. B. Means, president of the First National Bank of Saguache, says: "The banks of this county will not get their money back until the farmers get to milking more cows."

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Coming to Colorado for Cattle.—Mr. F. G. Ketner, in charge of livestock marketing for the Ohio Farm Bureau Federation, in a speech before the National Livestock association at Colorado Springs paid high tribute to the quality of the cattle which he purchased here last fall. The shipment went through with only two stops for feed and with very little loss. When put on feed, they began to gain at once and at the end of thirty days had made a normal gain. Mr. Ketner stated that all the feeders in Ohio were anxious to get this class of cattle and that their normal demand was for nearly 100,000 head. The Colorado producers will get their share of this business if they can furnish reliable advance information and co-operate with the Ohio buyers in the right spirit. The competition will be keen, as other states have feeder cattle for sale. The Colorado State Farm Bureau has already outlined a plan with Mr. Ketner to furnish detailed state reports, based on reports submitted by the counties, and is ready to co-operate with any organization to render a service to the livestock producer along this line. Plans for these county reports will be worked out along lines already suggested and will be submitted for approval in the near future. This plan for the direct marketing of feeders has been approved by the National Stockgrowers' association and the Colorado Stockgrowers' association at their annual meetings held recently.

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Information for Livestock Shippers.—Mr. C. B. Hutchings, traffic manager of the American Farm Bureau Federation, calls attention to circular No. 436, issued by the Western Weighing and Inspection Bureau, showing the number of head of livestock required to make the carload minimum, also the number that can be safely loaded in the cars of different lengths. This is valuable information to all shippers of livestock in enabling them to prevent losses due to overloading as well as underloading. Copies of this circular can be obtained by writing direct to Western Weighing and Inspection Bureau, Chicago.

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Joins Organization Staff.—Chas. E. Gunnels, director of organization, announces the appointment of Estes P. Taylor, director of agricultural extension in the university of Arizona and state leader of county agents, as a member of the organization staff of the A. F. B. F. In his younger days Mr. Taylor was a cowboy on a large cattle ranch in Wyoming. He graduated from the Colorado Agricultural college, Fort Collins, in 1902. He served as investigator in crop production for the university of Kentucky, Lexington, and went from there as assistant investigator and field agent of the department of horticultural inspection in the university of Illinois, Urbana. After three years Mr. Taylor was employed as field agent for the Colorado Agricultural college and the Grand Junction Fruit Growers' association in Western Colorado, assisting in farmers' organization work and acting as agricultural advisor when county agent work was first begun. Later he became manager of a large farm and fruit enterprise in both Colorado and Kansas, and was investigator in horticulture at the Missouri state fruit experiment station. The university of Idaho then employed him as an extension specialist in fruit and potatoes. In Idaho he assisted in the organization of co-operative farmers' organizations. Mr. Taylor instituted the first certified potato seed growing by potato growers of Idaho and served as chairman of the committee formulating official rules governing potato seed certification of the eleven western states. Before going to Arizona Mr. Taylor was field manager of the Utah Fruit Growers' association, Salt Lake City. At the university of Arizona, Tucson, Mr. Taylor was director of agricultural extension, state leader of county agricultural agents, and assistant dean of the college of agriculture. He organized the first farm bureau in the state of Arizona.

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Woman's Committee Re-Appointed.—President J. R. Howard of the American Farm Bureau Federation announces the re-appointment of the womans' committee. Mrs. W. G. Jamison, La Veta, Colo., has been added to the committee to represent western farm women. The committee as now constituted is as follows: Mrs. Chas. Schuttler of Missouri, chairman; Mrs. John C. Ketcham of Michigan, Mrs. A. E. Brigden of New York, Mrs. Izetta Brown of West Virginia, Mrs. William G. Jamison of Colorado.

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Pooled Wools Move.—Director C. J. Fawcett of the Wool Marketing Department advises officers of state wool pools that the year 1921 closed with quite a strong wool market, both domestic and foreign. The domestic market advanced 1 to 2 cents per pound recently. Mill consumption is somewhat less than in the months immediately preceding. The trade is feeling the usual effects of the holiday season and the purchase of wool has been somewhat curtailed. Foreign markets are very strong, particularly on the finer grades. The American buyers are again in the foreign markets seeking the higher spinning wools.

From the Nation's Capital

NATIONAL AGRICULTURAL CONFERENCE RECOMMENDS CONSTRUCTIVE POLICY TO AID FARMER.

E. E. REYNOLDS.

BEFORE its final adjournment, the National conference on agriculture called by Secretary of Agriculture Wallace to devise means for relieving the present depression and formulating a permanent agricultural policy, adopted a number of resolutions of special interest to farmers and stockmen in the range country. Among them was a constructive national livestock policy, which would include provision for more adequately financing livestock producers with special provisions for men of small livestock holdings. This is to be provided for by legislation extending the present powers of the War Finance Corporation by an extension of time of at least one year in which applications for loans may be made; authorizing the War Finance Corporation in extending credits to livestock producers to take into consideration lands owned or leased as additional security, and provisions for making loans direct to borrowers whenever banking or loan company facilities are not available, with a five-year time limit on stock loans at an interest rate not exceeding 7 per cent.

A reduction of livestock freight rates, the organization of livestock producers into county and state associations co-operating with national associations for the dissemination of information as to market, feed and transportation conditions, and co-operative shipping and marketing livestock as worked out by the farmers' livestock committee of fifteen, the endorsement of the Packer and Stockyards act, and the French-Capper Truth in Fabric bill were among the recommendations.

The proposal to transfer the administration of grazing on national forests from under the jurisdiction of the Department of Agriculture was opposed, and the appraisal of grazing values on the different national forests with the present fees through maximum charge and readjustment of grazing fees downward for inferior forests was favored, as was a system whereby animals, meat products and wool may be classified and brought to standard grades.

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Recommended Establishment of a Land Commission. — Recognizing ..the wisdom of President Harding in urging that the government should give encouragement "to every practical proposal for watering our arid land, for reclaiming cut-over forest areas, for protecting fertile valleys from inundations, and for draining the potentially rich and widely extended swamp areas," and that such reclamation should be carried on only in the light of the fullest knowledge as to the uses to which the land is best adapted, it was recommended that a national land commission be established, including representatives of the governmental agencies concerned with administering the agricultural interests of the nation.

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Favored Regulation of Privately Owned Forest Land.—The committee on a national forest policy recommended that the cutting of timber on privately owned forest lands be regulated by Federal legislation, and that provision should be made for complete fire protection upon public and private forest lands, through co-operation between the national government, the states and the private owners.

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Recommended That Production Statistics Be Improved.—The committee on crop and market statistics recommended that the United States Department of Agriculture adopt the county as the geographical unit for its estimates of crop and livestock production; that the Federal Department of Agriculture publish monthly balance sheets on farm and ranch supply of each class of meat animals; that periodical estimate be published showing the number of head of meat animals to be marketed during a given period, the approximate date to be marketed, and weight per head when ready for market. It was also recommended that the Bureau of Markets report the production and prices of wool in more complete detail and with greater frequency than at present.

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Proposed National Agricultural Advisory Council.—The committee on coordination of state and Federal legislation recommended that the President and the secretary of agriculture take steps to bring about the establishment of a national agricultural advisory council which should be a continuing body fairly representing all interests in agriculture and which should meet, from time to time, for the consideration and development of a permanent program of agriculture.

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Urged Congress to Provide Means for Short-Term Credit.— The conference urged upon Congress the enactment of legislation to meet the need for short-term credit of from six months to three years' time. It was recommended that as soon as the needs of small borrowers and the available funds of the Federal Farm Loan system will permit, the borrowing limit be raised from $10,000 to $25,000; that joint stock land banks be permitted to issue bonds in the amount of twenty times their capital; that the Farm Loan act be amended to liberalize the purposes for which loans may be made, so that they can be made to any actual farmer to liquidate any indebtedness.

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Opposed Issuance of Tax-Free Securities.—Upon the subject of taxation it was recommended that there be a constitutional amendment prohibiting issuance of tax-free securities, provided that farm loan bonds be exempted; that if additional revenue be needed the excess profits tax on corporations be restored; that agriculture receive the same consideration as industry in framing the tariff. A consumption, sales or manufacturers' tax or any other tax which shifts the burden onto the necessaries of life, was opposed. Henry Ford's Muscle Shoals nitrate fixation proposition and the St. Lawrence ship canal project were favored.

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Favor Federal Aid for Highways.— The action of Congress in continuing

(Turn to Page 20).

Farmer Putnam's Farewell.

In the stage version of the story of Disraeli, the British Prime Minister, this historic character is quoted as saying: "Farewells should be sudden." It is the truth. Why linger over a parting even from our best friends? Best friends is used advisedly, for a man's best friends are those who know his strength and his weaknesses; in other words, those who appreciate the fact that he is human. On this basis Farmer Putnam has many friends, for he has shown himself as he is, because what he has written in this magazine in the past five years has been the uncensored expression of his experiences. I am compelled to speak for him now because he has shut up like a clam. He has told me to say that the next year will find him at Colorado Agricultural College perfecting himself in his work, the improvement of rural life. He may write a book—if he is properly encouraged by those who have been his readers. Send your encouragement to his winter residence address, 215 Logan street, Denver. Let him know what you think of the idea and make suggestions, if you wish, because the book—if he writes it—will be a human interest story of rural life in this western country. He needs your kind words and your good thoughts. You know how he feels about co-operation—helping each other—and that begins with the right mental attitude. Working together thus he thinks you folks and he will be able to write a worth while book. Don't forget the address, which is Farmer Putnam's town residence.

ALVIN T. STEINEL.

TYPICAL OF GOODYEAR VALUE

Buyers of Goodyear Tires today are in an enviable position. Their money buys more in tire quality and tire mileage now than ever before.

The first reason for this is the improved design and construction of Goodyear Tires.

The second is their present low prices—the lowest in the history of the company.

Typical of Goodyear values now is the popular 30 x 3½ Goodyear Cross Rib clincher, illustrated above with its companion, the famous 30 x 3½ Goodyear All-Weather Tread.

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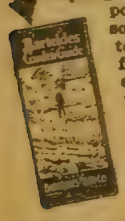

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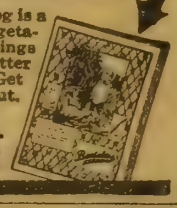

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New Mexico Drainage Trip.

Sixty-one Valencia county farmers, representing all the river precincts of the county, left early Sunday morning, January 15, on the start of a 500-mile excursion to the Mesilla valley for the purpose of studying the practice and efficiency of drainage and irrigation construction and operation and drawing conclusions as to the practicability of such work in the middle Rio Grande valley. This excursion was very likely the largest, longest and most comprehensive excursion ever taken by a county group of farmers for the purpose of studying conditions and gathering data.

The first day the excursion made Hot Springs, where it stopped over night. The second day it went through the Palomas and Rincon valleys and reached the Leasburg division dam soon after noon, where the close study of irrigation construction was begun. The excursion was met here by Reclamation Engineers Ainsworth, Knapp and Ball; President Kent of the New Mexico A. & M. College and Professors Garcia, Bloodgood, Elser and Knapp.

From the diversion dam the excursion visited several drainage canals, where practical explanations of the results of drainage were made by Antonio Barncastle, a native farmer of Dona Ana. They also had opportunity during the afternoon to watch a dredger at work reconstructing an irrigation canal.

That evening, in the Temple of Agriculture at Las Cruces, H. H. Brook, president of the Mesilla Valley Irrigation district, gave a three-hour explanation to the members of the excursion on the benefits of organized drainage and irrigation, the costs of construction, operation and maintenance, and the benefits of close co-operation with the Reclamation service. He commended the Reclamation service for its efficiency and stated that its engineers were recognized as the best in the world.

The third day the excursion visited the State College, and were shown over the campus by Dr. Kent, where the engineering, livestock and horticultural departments interested all the farmers.

After two hours spent at the college the excursion inspected the Ruth ditch-cleaning machine at work. This is a small, movable type of dredger which the Reclamation service expects to modify and develop for work in cleaning irrigation and drainage canals, as it cleans ditches for 6 cents a yard, or one-third of what it costs to do the work with teams. The Mesilla diversion dam was then visited and every one was greatly interested in this unusual type of dam which is peculiarly adapted to the Rio Grande conditions, where the silt in the water constitutes one of the main problems of irrigation.

They visited a number of farmers on their farms, who all showed the values they had received from drainage.

The fourth day of the excursion started on its return by way of the Elephant Butte dam, where a stop was made to see this wonderful structure which holds back the water of the largest artificial lake in the country.

This excursion was organized by E. M. Otero, F. D. Huning, S. Newstadt, B. Romero, D. Aragon, E. Davis, working with County Agent R. S. Conroy.

New Mexico Team Wins.

The New Mexico state team representing the Alamogordo Vocational High school, won the trophy in stock judging for secondary schools at the National Western Stock Show in Denver, January 14, over strong competition, the scores being as follows: New Mexico, 1,447 points; Greeley, Colo., High school, 1,405 points; Colorado School of Agriculture, 1,358 points; Lander, Wyo., High school, 1,326 points.

The winners were trained by John Goe, a graduate of Colorado Agricultural College, now instructor in the Alamogordo High school. The victory is considered remarkable because of the fact that the young men had little opportunity in their home section to lay hands on purebred cattle. They had been so well trained in theory that they passed judgment with comparative ease on the animals lined up before them in the contest. The winning team was composed of Lee Sims, Earle Parker and George Dowdle.

The New Mexico team won the right to enter at Denver by winning the New Mexico stock judging contest for schools offering courses in vocational agriculture held at Roswell recently.

Alamogordo won first place with a total score of 2,106. Hagerman second with 1,824½, and Roy third with 1,820½. Lee Sims, with the Alamogordo team was the highest scoring individual with a team score of 490 out of a possible 500. Leland King from Roy made the second highest individual score, making 431½ points. Lee Simms held the high score on horses, fat cattle and breeding hogs, and had a perfect placing on the other two rings, sheep and fat hogs, but was tied for highest score by other contestants who also had perfect placings on these rings.

Three sectional contests were held to eliminate the number of teams to enter the state contest. The northern contest held at Springer was won by Roy. The eastern contest was won by Hagerman, and the southern contest was won by Alamogordo. These three winning sectional teams came together for the state contest at Roswell. By this method every school had an opportunity to get into the state contest. At the same time by eliminating the number in the state contest by these sectional contests the expense of bringing a larger number of teams to one central point was eliminated.

The Roswell Chamber of Commerce contributed a large silver loving cup to the winning team and medals to the contestants making the first and second highest individual scores. The Roswell Military Institute entertained the contestants while in Roswell and provided sleeping quarters and furnished them their meals. County Agent Thomas of Roswell rendered a great deal of assistance to the contest by helping to line up the livestock and acting as judge of the reasons for placings.

From the Alamogordo winning team was selected the team of three to compete at Denver in the contest open for secondary Schools of Agriculture and High schools. The additional members of the Alamogordo team are Charles Crosby and John Atkinson.

Mr. Goe was on the Colorado Agricultural college stock judging team which went to the International last year and also the National Western.

Treatment for Smut in Grain.

Please give me the government formula for treating smut in barley. What is the difference between formalin or formaldehyde and blue stone?—F. E., Fremont County, Colo.

The formalin treatment for preventing head smut in barley is given as follows:

Prepare the formalin solution, by diluting 1 pint (or pound) with 45 gallons of water. This solution may be applied in one of two ways.

Put the solution into a tight barrel or vat and dip into it the sacks half filled with grain, but tied at the top. Move them up and down for a few minutes to get the air out and to wet all the seed. Keep the grain immersed in this solution for ten minutes. Take out the sacks, drain them, and let them stand without opening for two hours or more—if necessary over night. Or the following may be used:

Spread the grain on a barn floor or other suitable place, a sackful at a time, and sprinkle the formalin solution on each sackful with a watering pot. Then shovel it over and mix thoroughly to wet every kernel and finally put it into a pile and cover with blankets for two hours more.

You ask as to the difference between formalin or formaldehyde and blue stone. The latter is also known as copper sulphate and while some farmers use it, it is not put up in convenient shape and if the solution is not made accurately is apt to reduce the germination of the grain treated with it. Formalin for the formaldehyde solution is preferred for smut treatment.

Alamagordo, New Mexico, vocational high school stock judging team and coach, John Goe. State prize winners and first at National Western Stock Show, 1922.

Butchering Beef for Sale.

Can I butcher a beef for myself lawfully without a license?

Yes.

Can I hire a licensed butcher to butcher a beef and sell part of the beef without a license?

No license is required by a farmer who sells his own beef, unless he attempts to sell it in town, where ordinances sometimes are in force which prevent such sales without inspection.

Can I sell the hide immediately without having an inspection?

No. Section 195 of the law on this subject says: "It shall be unlawful for any person, corporation, or company, to kill for his, her or their use and consumption, any beef or veal without preserving or saving the hide of such animal intact for a period of not less than thirty days and presenting the same for inspection upon the demand of any person—(Ans. to G. A. R., Lincoln County, Colo.)

Sheep Awards at Stock Show.

Following are the awards made in the breeding sheep classes at the National Western Stock Show, Denver, January 14 to 21, 1922:

BREEDING SHEEP.

RAMBOUILLET.

Judge—E. L. Potter, Corvallis, Ore.
Exhibitors—F. M. Hartman & Co., Longmont; King Bros. & Co., Laramie, Wyo.
Aged Rams—(3 shown)—1 and 2, King Bros. Co.
Yearling Rams—(4 shown)—1, 2 and 3, King Bros. Co.
Ram Lambs—(5 shown)—1, 2 and 3, King Bros. Co.
Yearling Ewes—(5 shown)—1, 2 and 3, King Bros. Co.
Ewe Lambs—(5 shown)—1, 2 and 3, King Bros. Co.
Four Lambs Bred by Exhibitor—(3 shown)—1, F. M. Hartman & Co.; 2 and 3, King Bros. Co.
Get of Sire—(3 shown)—1 and 2, King Bros. Co.; 3, F. M. Hartman & Co.
Flock—(2 shown)—1, King Bros Co.; 2, F. M. Hartman & Co.
Champion Ram—King Bros. Co.
Champion Ewe—King Bros. Co.

HAMPSHIRE SHEEP.

Judge—R. Brackenbury, Denver, Colo.
Exhibitors—Kansas Agricultural College, Manhattan, Kan.; Bayard M. Nichols, Longmont; C. D. Turner, Fort Morgan; University of Nebraska, Lincoln, Neb.
Aged Rams—(2 shown)—1, C. D. Turner; 2, Bayard M. Nichols.
Yearling Rams—(3 shown)—1, University of Nebraska; 2, Bayard M. Nichols; 3, Kansas State Agricultural College.
Ram Lambs—(3 shown)—1, Bayard M. Nichols; 2 and 3, Kansas State Agricultural College.
Yearling Ewes—(3 shown)—1, Kansas State Agricultural College; 2 and 3, Bayard M. Nichols.
Ewe Lambs—(3 shown)—1 and 2, Bayard M. Nichols; 3, Kansas State Agricultural College.
Four Lambs Bred by Exhibitor—(3 shown)—1, Bayard M. Nichols; 2, Kansas State Agricultural College; 3, University of Nebraska.
Get of Sire—(3 shown)—1, Bayard M. Nichols; 2, Kansas State Agricultural College; 3, University of Nebraska.
Flock—(3 shown)—1, Bayard M. Nichols; 2, Kansas State Agricultural College; 3, University of Nebraska.
Champion Ram—C. D. Turner.
Champion Ewe—Kansas State Agricultural College.

CORRIEDALE.

Judge—R. Brackenbury, Denver, Colo.
Exhibitors—Arthur King, Cheyenne, Wyo.; King Bros. Co., Laramie, Wyo.; Wyoming Corriedale Sheep Co., Cheyenne, Wyo.
Aged Rams—(3 shown)—1, King Bros. Co.; 2, Wyoming Corriedale Sheep Co.; 3, Arthur King.
Yearling Rams—(3 shown)—1 and 2, King Bros. Co.; 3, Arthur King.
Ram Lambs—(6 shown)—1 and 2, King Bros. Co.; 3, Arthur King.
Yearling Ewes—(5 shown)—1 and 2, King Bros. Co.; 3, Arthur King.
Ewe Lambs—(8 shown)—1 and 2, King Bros. Co.; 3, Arthur King.
Four Lambs Bred by Exhibitor—(3 shown)—1, King Bros. Co.; 2, Wyoming Corriedale Sheep Co.; 3, Arthur King.
Get of Sire—(3 shown)—1, King Bros. Co.; 2, Wyoming Corriedale Sheep Co.; 3, Arthur King.
Flock—(2 shown)—1, King Bros. Co.; 2, Arthur King.
Champion Ram—King Bros. Co.
Champion Ewe—King Bros. Co.

It is hard to tell in some countries whether liberty is preserved or canned. —Washington Post.

Farmers' Service Bureau

Readers are invited to make generous use of this department. Questions regarding any branch of farming, livestock production, animal diseases, legal matters pertaining to the farm, homestead inquiries and the like cheerfully and promptly answered by letter and through the magazine. Address all communications to SERVICE BUREAU, WESTERN FARM LIFE, Denver, Colorado.

Signing your name to inquiries and giving your address is the only requirement we make of our readers for service in this department. All inquiries will be promptly answered by mail and replies to many of general interest will be printed. Your initials only will appear in the paper. We ask you to sign your name simply as an evidence of good faith.

Has anyone among our readers had practical experience with Hubam, the new annual variety of sweet clover? We have been asked for the results of experiences farmers have had with this new clover. Write to this department if you have anything to report.

Hogs Must Be Kept In.

What is the state law on hogs running at large; is there any?—W. E. S., Mesa County, Colo.

The state law forbids the running of hogs at large. Owners of hogs who do not confine them to their premises are liable to a fine and to the payment of damages inflicted by the hogs while at large.

Spraying for Codling Moth.

Is there a law in Colorado in regard to spraying apple trees against codling moths? We are in an orchard district and our entire place is devoted to finest fruit culture and we have a neighbor who never sprays. Our apples are badly stung by his worms, no matter how often we spray. If a pest district can be organized, please tell us how.—Subscriber, Montrose County, Colo.

Spraying is not compulsory in Colorado. If you have a county horticultural inspector, as most fruit raising counties do, take the matter up with him and he will use his influence to induce your neighbors to spray their trees. If not, write to Dr. C. P. Gillette, State Entomologist, Experiment Station, Fort Collins, who will advise you concerning the organization of spraying districts.

Mortgage May Be Foreclosed.

A sold a 320-acre ranch to B, for which B paid part cash, and for the balance gave eight notes of $500 denomination and one note of $250, with interest at 6% if notes were paid when due; otherwise each unpaid note would draw 8% from maturity until paid. A purchased a 640-acre farm from C and gave these notes and mortgage, which secured the notes as part payment. C purchased a 645 acres from D, for which he gave these notes and the mortgage as part payment. B did not pay the note that was due and he has not paid the interest for the last year. D has written to B twice, but has not received a word in reply. What can D do about the matter? Can he foreclose on the mortgage before the last note becomes due?—T. M. R., Idaho.

If the mortgage is the usual one you may foreclose upon failure to pay interest, taxes and the like, and on failure to pay one of the notes.—Hamlet J. Barry, 726 Equitable Bldg., Denver.

Early Plowing Pays.

Is there any advantage in plowing sod (dry land) early in February, then disking well and listing to corn in May, over the later plowing and planting with a sod planter? It would cost more to plow early, disk and then list, but if it will grow better corn I will do it.—J. L. A., Washington County, Colo.

Early spring plowing of your sod and thorough disking with the intention of listing to corn late in May is a good plan. It may cost more to plow early, but you will get the advantage of moisture that comes in the spring, whereas if you wait to plow after the planting season begins you would be taking a long chance on getting a crop.

Barley Hay a Good Feed.

I have a Holstein milk cow which is sick. Her legs are swelled up at the joint and she is very thin, although she eats all right. We feed her barley and good oat hay. Will barley cause her to lose her calf?—F. E., Fremont County, Colo.

You should have a veterinarian examine the cow and tell you what to do for her. Barley hay will not cause cows to lose their calves. While it is not as good a feed for dairy cows as oat hay it is nevertheless extensively used and has no bad effect on them.

Rabbits Have Ear Canker.

I have tame rabbits and my old rabbit has a sore in both ears and a little month-old one has a sore on its nose. I have been putting some salve in the old rabbits' ears, have used this twice and it seems to help it as the scales are coming off. The little rabbit I put plain vaseline on it once and it is almost well. What causes this? What can I do to prevent it? This is the first I have ever had of this disease and I have had rabbits three years. My rabbits have fleas, do they cause this sore?—J. M. E., Phillips County, Colo.

Your rabbits are probably suffering from ear canker, which can be corrected by softening the scab with soap and water and then applying a mixture of twenty parts of olive oil and one part carbolic acid or creosol. Several treatments are necessary to effect a cure. Ear canker is caused by a mite.

Feeding Dried Beet Pulp.

Please give me information on how to feed dried beet pulp to milk cows.—H. C., Wyoming.

Dried beet pulp is usually rated ten per cent below corn or barley as a dairy feed. It should be moistened with two or three times its weight in water before feeding. In that way it can be used as a good substitute for corn silage.

Removing Grease From Papers.

Is there any way to take grease spots out of valuable papers?—F. W., Pueblo County, Colo.

The only thing we know to suggest would be to place the paper between soft blotters and apply a hot iron, which should draw out the grease which is absorbed by the blotting paper. If the spots are not too old they can probably be removed in this way.

Division Fence Question.

A has built fence 6 feet from line. B does not wish to have a lane, but A will not connect fences. Must B build his fence 6 feet from line the same as A? Could B build his fence on line and force A to connect? Is a lane required by law?—J. B. B., Fremont County, Colo.

The law provides that adjoining land owners each must build or pay for one-half of the division fence. No provision is made for leaving a lane on the line except by agreement of adjoining land owners. We do not think under these circumstances that B is obliged to build his fence six feet from the line. The matter is one which the law leaves to the property owners to adjust and if they cannot agree they should call a third party as arbitrator.

On Sowing Alfalfa.

Please give me information on when, how and what with to plant alfalfa.—J. J. T., Bent County, Colo.

If the crop is to be grown under irrigation the land should be plowed the previous fall and seeded about the same time that early grain is seeded in the spring. Fall plowing insures a better seed bed than if you wait until spring. In preparing the land for seeding, harrow the field as soon as the surface is dry enough in spring and pulverize with a disk. Grade off all back furrows and fill in the dead furrows. Level the field to do away with all surface irregularities. There is little danger of sowing alfalfa broadcast too early after the seed bed has been well prepared. The rate of seeding under irrigation runs about 12 to 14 pounds, providing the seed is of good germination. In planting with a nurse crop oats is usually used, about 60 pounds to the acre on irrigated land. The method of seeding varies in different sections, but two things are necessary anywhere—getting the seed evenly distributed and covering it to the proper depth. Alfalfa may be planted with a drill or sown broadcast. The proper depth to plant varies with the soil. On fairly heavy soils with a reasonable amount of moisture the seed ought to be covered from one-half to three-fourths inch deep, while on lighter soils it may well be covered to a depth of one inch. It must be down to moist soil to insure prompt germination. If sown broadcast it may be covered by harrowing.

Establishing Rural Mail Routes.

How does one establish a rural mail route? There are quite a number of farmers around here and our nearest postoffice is nine miles away. There is a postoffice seven miles away, but it is inconvenient for all around here except about three families, and one of them runs the office and also carries the mail. —T. W. M., Teller County, Colo.

Write to the Fourth Assistant Postmaster General, Washington, D. C., and ask him how to proceed in the matter. We understand that the people residing on the proposed route will have to sign a petition asking for the establishment and that a map of the route must be presented with the petition. Also that you should have at least fifty farmers signed up before you can hope to have a route established. The Fourth Assistant Postmaster General will be glad to give you all of the necessary information.

Partnership Suit Advised.

Where two parties have an equal share i nthe ownership of a certain farm implement, through the purchase of the same and they, or one party, desired to divide the ownership and the other party refused to buy or sell, and deprived said party of the use or part control of said implement, what would be the procedure in a justice office? Would an action in replevin lie to obtain possession or division in such a case?—R. H. B., Montezuma County, Colo.

The only suggestion I have in this matter is a suit in partnership account in the district court. This would dispose of the entire matter. Replevin does not seem to me to be the remedy. —Hamlet J. Barry, 726 Equitable Bldg., Denver.

Wife's Interest in Homestead.

Can a homestead be sold without the wife's signature when the wife has lived on it and done more work toward a home than the husband has? Both are living on it.—Subscriber, Colorado.

If the homestead is a government homestead and patent has issued, whoever owns the property may sell it. The wife could "homestead" it under the state law, that is, enter it as a homestead on the margin of the record of the recorded title with the county clerk and recorder. If she has done so the property could be sold only with her signature. She might bring action against her husband if the property is in his name to declare a trust in the land for her.—Hamlet J. Barry, 726 Equitable Bldg., Denver.

Insects Attack Trees.

Please tell me how to prevent the bugs and bees from destroying the tree leaves. —Subscriber, Colorado.

Bees do not destroy tree leaves. Various kinds of spray materials are used for the destruction of leaf-eating insects that attack shade trees. The most common is arsenate of lead, which you can obtain from any seed house. You do not say whether the trees are shade or orchard trees, nor do you give us any idea concerning the kind of insect attacking them. However, in most cases the arsenate of lead spray will prove satisfactory in destroying these insects.

Sows Eat Their Young.

I would like to know what to do to prevent sows from eating their pigs at farrowing time, also to stop them from eating chickens. I have a good sow that always raised from eight to nine pigs each litter, and four weeks ago she farrowed, but this time only six pigs, and now she has only one left.—A. S. New Mexico.

The sow usually gets her first taste of the pigs by eating a dead one, and it is almost impossible to cure her. If one has green grass to turn out on it may be stopped, but at this time of the year about all that can be done is to take the pigs away from her and put them with her to suck. You should aim to prevent this condition by feeding the sow rolled oats on a feeding floor or on hard ground for a week or two prior to farrowing, thus forcing her to take exercise. Do not pen her up any length of time prior to farrowing. It is common practice among a good many men to shut their sows up a week or two before farrowing in a much smaller pen than the one she has previously been running in. This is almost sure to result in digestive troubles and frequently it results in the pig-eating habit. If the sow is feverish and constipated at farrowing time, give her a dose of epsom salts in her feed prior to farrowing. If she will not eat the feed with the salts in, then take an ordinary small syringe and inject three or four tablespoonfuls of castor oil into her mouth far enough back so that she is forced to swallow it. Do not feed the sow much of anything right after she has farrowed. Give only water colored with a little shorts or bran. This should be the policy for 24 to 48 hours, depending on how soon the fever leaves her udder, or whether she is coming to her milk.

Regarding chickens: A subscriber wrote us some time ago suggesting that an opening be made at the bottom of the pen large enough for chickens that get in to slip out easily. Many people who have had similar trouble say that feeding tankage with corn to the pigs soon stops the chicken-catching habit. Balancing the ration is the best remedy for both troubles.

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Sweet Clover on Dry Land.

I am much interested in sweet clover, for I am sure that it is a valuable crop especially for the Plains country. In fact, I believe that it is the best forage crop that we can raise and that if it was generally grown it would mean much to this section.

Like many others, I was taught to believe that it was a noxious weed and as a boy on an Iowa farm, I spent many a dreary hour trying to eradicate it from the roadside adjoining my father's farm. However, a few years ago my brother, who now owns that farm, told me that his horses were eating the sweet clover which he had cut with prairie grass for early hay, and they were leaving the prairie hay uneaten. Soon after this, an old gentleman told me that one time "back in Missouri" he had a yearling calf that he could not keep from the cow, and that as a last resort he put the calf into a tight lot where there was nothing but "that pesky sweet clover," and he told it to "stay there and starve." However, after the second day he said that it ate the sweet clover greedily and he never saw a calf do so well.

These two incidents set me to thinking, and when Frank Coverdale of Delmar, Iowa, wrote an article on "Sweet Clover as a Hay Crop," I wrote to him and received several letters from him in which he said: "I have fully tested the value of sweet clover as a forage crop, as a hay crop and as a soil builder. As a pasture crop, it is relished by all kinds of livestock; as a hay crop, it is in many ways superior to alfalfa—it is sweeter and better relished by all kinds of stock than any other hay that I have ever fed. However, it is not easily handled and it must be cut at the right time. As a soil builder, I believe it would work wonders in your eastern Colorado country. It's long roots decaying would loosen the soil and afford cavities for moisture. Sweet clover is certainly a great drouth resister and it will grow on any soil."

Mr. Coverdale suggested that I write to A. L. Root of Medina, Ohio. Mr. Root is a bee man, but he recommends sweet clover not only for bees, but as a "fertilizer for the soil, a food for cattle, horses, swine and sheep, and as a valuable plant to store nitrogen-bacteria in the soil and thus prepare it for alfalfa." Mr. Root has published a book entitled "The Truth about Sweet Clover," a copy of which he sent me.

I then wrote to the U. S. Department of Agriculture and received several bulletins which recommend sweet clover very highly. I have written to several agricultural colleges and have received valuable bulletins. I have also written to many farmers who have tried it and find that they recommend it very highly.

J. T. Mardis of Falmouth, Ky., writes: "Sweet clover will thrive in the dryest weather and it affords more pasture than any other grass. You ask if it makes good hay? You bet it does, and every kind of stock eats it greedily."

Henry Campbell of Seward, Nebr., wrote me: "Sweet clover is taking the lead over all other grasses in the western part of this state. All stock eats it readily. I think it does better on sandy land."

J. W. Wilson of Concordia wrote: "I have tried it as pasture for cattle and hogs and found it excellent."

Henry Stewart of Whiteside, Ill., wrote: "Sweet clover has many characteristics of superiority over all other legumes. It starts earlier than alfalfa. It will grow in the dryest weather and it will withstand greater hardship. Alfalfa will not stand close pasturing, but sweet clover may be eaten into the ground and it will grow and do business."

W. C. MacDougal of Sydney, Australia, says that in his country sweet clover has been sown on raw white sand and that in five years this white sand was changed into a dark rich soil capable of maintaining one steer per acre.

These testimonials convinced me that my ideas of sweet clover had been wrong and I began sowing it several years on my farm adjoining Akron. However, I found that it is not easy to get a stand and that it is hard to handle. Stock eat it greedily after they become accustomed to it and it is excellent both as hay and pasture. While at Akron recently I found it growing up in the buffalo grass on the fair grounds and about town and some of the people there are blaming me for it. I now have 100 acres well seeded on my farm west of Elizabeth, and I wish that I had several hundred acres more. It is hard to keep a stand in the pasture, for the stock eat it so close that it can not re-seed; however, if all the pasture was well set with it, this difficulty would be more easily controlled.

I have not tried it as a hay crop at Elizabeth, but at Akron I found that both horses and cattle are very fond of it.

I had a field cut for seed two years ago, but have not been able to get a machine to thresh it. I would be glad to hear from others who have had experience with sweet clover as a hay and seed crop, especially as to methods of harvesting. Send letters to me in care of Western Farm Life.—W. M. Tarr.

Some Cows Poor Customers.

When you sell your corn, hay or other feeds on the market you give a great deal of attention to the price you receive. You will also watch closely the price of butterfat. Do you check up as closely on what your cows pay for the feed they consume? How many who milk cows can tell what they return for each dollars' worth of feed they eat? In a certain cow testing association the figures obtained by the tester showed that the cows averaging 100 pounds of butterfat a year returned 268 pounds of fat and 6,250 pounds of milk for each $100 worth of feed. The cows producing an average of 200 pounds of butterfat a year returned 478 pounds of butterfat and 9,524 pounds of milk for each $100 worth of feed. While the cows averaging 400 pounds of butterfat a year returned 560 pounds of butterfat and 10,870 pounds of milk for the same value of feed. In other words, one cow returned 268 pounds of butterfat and 6,250 pounds of milk for each $100 worth of feed, while her stallmate returned 560 pounds of butterfat and 10,870 pounds of milk for the same feed costs. Including labor, interest and other items of overhead expense, the difference would be even greater. This difference in results all hinges on the relative capacity of the cows.

Membership in a cow-testing association is about the only way in which to obtain the kind of information used in the above studies of comparative capacities of cows in the same herds. The individual farmer usually is too busy to do the record work done by the tester in a cow testing association. Without this information he is groping in the dark and in many instances selling his feed to cows that are poor customers. The small fee necessary for the service rendered through membership in a cow testing association is returned many-fold if a proper use is made of the information obtained. The cow testing associations are steadily reducing the waste of feed marketed through cows of inferior producing capacity.

Sorghum Maker Is Heard From.

Editor, Western Farm Life:

I notice in your issue January 1: "Do They Make Sorghum." Well, now you are hitting too close home for me to keep still. I am right here to defend our grand old Mesa county in Colorado as being one of the best, if not the best, county all around of any in the state, as we can raise anything here we undertake, even to a fuss.

Now about this sorghum: I am sending you a sample of syrup I make and I want it judged along side of the other samples you may have received. Now, a word to farmers. We can grow cane that will produce 200 gallons of syrup per acre here. We find that our heavy land produces just as good a quality but not as strong in quantity per acre as our lighter soils.

We use the Early Amber cane for the best results; while color is slightly darker, flavor cannot be beat. Our molasses sells at the mill for $1.50 a gallon and we find no trouble in disposing of surplus stock.

I made 130 gallons last season and 250 gallons this fall, and expect to make even more next fall, as I must establish myself before the farmers will co-operate with me in raising it.

I was born and raised on a farm with a cane mill in the Sucker State. Nothing was left to cut me off from the Show Me state but the river, and I want to inform your readers that no better molasses was ever made either in old Missouri or Illinois than we can make right here in our grand old Colorado if we pursue the right methods.

The worst features we have to contend with here are that farmers have been raising cane so long for feed they get it too thick and plant it too late for molasses.

An early variety should be used on account of short seasons here and planted about corn planting time; not much later. If good care is given it the desired results will be obtained, especially if the syrup maker is onto his job.

Now, let's all get together on this and put a barrel of sorghum in the cellar and not buy from fifty to a hundred dollars' worth of sugar a year, as we are doing at the present time.—R. F. Brothers, Route 2, Grand Junction, Colo.

Grain Growers Buy Elevators.

Many local grain growers' associations organized by the U. S. Grain Growers, Inc., at country shipping points are evidencing interest in perfecting local co-operative or stock companies for leasing, buying or building grain elevators. This development was anticipated by the farmer directors of the national co-operative grain marketing company, says Frank M. Myers, secretary of the organization, who formerly was secretary of the national association of more than 3,000 farmers' elevators.

Farmers at Lafayette, Ind., who are members of the U. S. Grain Growers, Inc., have secured an option for the purchase of a private owned elevator at that place. Grain producers present at the first meeting formed a temporary association known as the Lafayette Farmers' Co-operative Elevator Association and secured the option in that name. Permanent officers and a board of directors will be elected when the stock in the new association has been subscribed.

Producers at Eureka, Mo., who organized a grain growers' association under contract with the U. S. Grain Growers, now feel that a farmer-owned elevator is a necessity and local farmers have made arrangements for a series of meetings with their neighbors in communities adjacent to Eureka preparatory to organizing an elevator association.

Anti-Freezing Solutions.

Radiators and cooling systems are not troublesome in the summer time, but they do require considerable attention in cold weather. The wise operator will use an anti-freeze mixture as a circulating medium.

The most common is calcium chloride, or common salt. The freezing point of a saline mixture varies from 22 degrees above zero for 10% salt to 18 degrees below zero for a 25% solution.

Some operators use kerosene as a cooling medium and while it does well in gas engines with a complete metal circuit, still in automobiles and tractors which sometimes have rubber connections, it is likely to be injurious. It also has a tendency to seep through joints and gaskets and deposit a film of an inflammable material on the exterior of the engine, which increases the fire danger.

A mixture of alcohol and glycerine is the best anti-freeze mixture. Alcohol does very well when used alone with water, but the glycerine acts as a retardant upon the rapid evaporation of the alcohol. With one part of the alcohol-glycerine mixture to six parts of water, the freezing point is lowered to 22 degrees fahrenheit. A 35% solution of alcohol-glycerine in water has a freezing point of 18 degrees below zero.

Remember Dairy Day, March 3.

At Johnstown, Weld county, Colo., $1,000 in cash prizes, two silver loving cups and a number of ribbons will be distributed among exhibitors of pure-bred Holstein and Guernsey cattle, at the twelfth annual dairy day show, which will be held March 3. Dairymen from Larimer, Weld and Boulder counties are eligible to enter this year. With the increasing interest in dairying in the Loveland district good exhibits from this section can be expected. It will be an excellent opportunity for those interested in dairying to obtain valuable information about the handling of dairy cattle and the industry in general.

The Colorado State Horse Breeders' Association held an enthusiastic meeting during Stock Show week, discussed prospects for revival of demand for draft horses, which seems satisfactory in every way, and virtually decided to hold a sale during the 1923 Stock Show. H. Bert Cave of Woodlawn Farm, Littleton, was re-elected president; J. D. Brunton of Glendale Stock Farm, Aspen, was made vice president, and J. R. Sergeant of Ft. Morgan was re-elected secretary. The association is organized both for educational and business purposes and the horse breeders find in the present outlook much encouragement, as a revival of the demand for heavy drafters for farm work is imminent.

Two- and Three-Plow Tractors

POINTING OUT THE DISTINCT ADVANTAGES AND DISADVANTAGES OF THESE POPULAR SIZES.

By J. W. Ray.

TODAY the 3-plow and 2-plow tractor are by far the most popular. Between these two there is perhaps little difference in the actual number in use. Both sizes have their champions among farmers having similar conditions and similar work to be done.

There are distinct advantages in favor of each, and, no doubt, a consideration of these advantages may be of value to the prospective purchaser.

The points in favor of the two-plow tractor are:

1. Ease of handling in small fields and close places. Since the 2-plow tractor will be found on smaller farms, it will naturally be called upon quite often to do odd jobs commonly done by a team of horses. In this work it will have to be easily and quickly handled in order to be useful.

2. Light weight on soil. This matter of packing effect on soil is more a matter of tractive equipment than weight. Even the largest tractors may have a light pressure per square inch if the weight be distributed over a large surface by use of a chain tread instead of wheels. Extra rims and lug equipment for wheel tractors help to accomplish a similar result.

3. Smaller first cost. Inasmuch as depreciation and interest on the investment, which are figured at a fixed rate per year, constitute one of the biggest items of operating expense, it is important that first cost be as low as possible. There is a close relationship between size of tractor and cost; in fact, cost can be pretty closely figured on a basis of pounds of weight. This is assuming, however, that high quality materials are used in each case. In this connection, it should be borne in mind that only a quality product should be considered when purchasing a tractor, for the wear and tear is much greater on a tractor than upon any kind of automotive equipment—excepting the airplane.

For the 3-plow tractor, the following advantages are claimed:

1. Greater amount of work done per man. This, of course, has a direct bearing upon the size of the farm and the amount of work to be done.

2. Less fuel cost per acre. This is not a universal rule, but other things being equal, a mechanical power unit of a size sufficient to draw three 14-inch plows should be able to plow an acre at less fuel cost than a 2-plow outfit, where each is operating at its greatest motor efficiency.

3. The additional belt power provided enables the farmer to operate threshers, huskers, ensilage cutters, feed grinders, etc., of good size with plenty of reserve power. Lack of this ample reserve power is most unsatisfactory.

The trend has been from the large size machines to the smaller from the first, because of greater ease of handling in small areas, but in England, where the fields average much smaller than in America, we find the 3-plow tractor the most popular. This is because of the big reserve of power needed to meet her widely varying soil conditions, and the demand for belt power of various kinds. Perhaps the same will come to be true in this country.

It will be noted that, in speaking of "sizes" of tractors, the smaller machines are rated according to the number of plows they will pull. Size does not depend upon weight nor dimensions of the tractor, nor altogether upon the bore ond stroke of the motor. The design and construction of the chassis into which the motor is placed is very important. This means the type of final drive, gear ratios, and nature of tractive equipment. All these things affect the transmission of power to the pulling point, and after all, this is what is meant by "size of tractor"—the power it is able to deliver effectively at its drawbar, or at its pulley rim. Moreover, this "power at drawbar or pulley" is not all a matter of pounds of pull. Speed also enters into the power equation. Two tractors may each be pulling their maximum load of 2,500 pounds at the drawbar when hitched to a plow, but obviously, if one is running in low gear at one and one-half miles per hour, it is not supplying the same power as the other which is moving at three miles per hour. It is doing less work, and the chances are, is not doing work of a good quality.

It has come to be customary to speak of tractor power in terms of the number of plow bottoms it will pull, since plowing is the work for which tractors have been most used in the past, and also the work at which there is the greatest expenditure of energy per acre. This usually means 14-inch plows, unless otherwise specified.

This method of rating may be very deceptive. The buyer should not place too much confidence in the tractor salesman who claims that his tractor "will pull three plows anywhere." When a tractor is sold as a 3-plow outfit, it is meant that it will pull three 12-inch or 14-inch bottoms in average soil. There are many places and many times where a 3-plow tractor in perfect working order could not pull two 14-inch bottoms, and other places where it could handle four or five. In the "heavy land" plowing in the Lincoln tractor trials in England last fall, many a tractor rated to pull three 14-inch plows was completely stalled attempting to pull three 10-inch bottoms. A dynamometer test showed, however, that they were exerting a pull of 3,000 pounds or more, because of the very heavy, sticky nature of the soil.

A farmer who buys a tractor with the understanding that it will handle three plows and then finds that it can handle only two successfully in his soil, is bound to be disappointed, even though it does all his other work efficiently and well. Being sure of having a good reserve of power over and above the tractor's rating, will go far toward insuring success and satisfaction.

The size of tractor best suited to a given farm depends not so much upon the number of tillable acres in the farm, as upon the crop rotation, labor distribution, and general nature of the work. Flexibility and versatility of the tractor are usually more important than large amount of power, and this is found most highly developed in the smaller machines. For instance, of two 640-acre farms, one may be devoted entirely to wheat, and here one of the larger machines is advisable, because of the large amount of plowing to be done and the need of power for running a large thresher; the other may be devoted to general farming and stock raising, in which case the area would be fenced into several fields, and a number of different crops would be grown. Obviously, a small flexible machine adapted to a wide variety of kinds of work is most successful in the latter case.

Do You Own a Tractor?—The above article is more or less a technical discussion of the adaptability of the different size tractors for different conditions. We would like to have letters from tractor owners, giving their actual experiences with their tractors on their own farms. We want to know just why you prefer a certain size tractor for certain work and conditions. We wish to show those of our readers who contemplate buying a tractor soon, why, from your actual experience, you prefer a certain size. We will pay $5.00 to the one writing us the best letter in which they explain most clearly the many advantages of the size tractor that they are using, the different work it has successfully performed, the cost as compared with other power—horse or tractor, also an opinion as to when and under what conditions it is advisable for a farmer to purchase a tractor. A prize of $2.00 for the second best letter will be given, and $1.00 for the third best. Do not fear that lack of writing ability will handicap you in competing for the prizes. The letters will be judged entirely upon the value of the facts they present. We want facts and information. We want this information so that our farmer readers will be able to profit by your experiences. You must give us your own actual experience, you cannot "borrow" the experience of someone else and write about it. Your letter must reach us by March 1. The time is short, so get busy right away. Address your letter to Editor, Western Farm Life, 1518 Court Place, Denver, Colo.

Sure and Steady Income From Diversified Farming.

(Continued from Page 3).

equipment was added. Mr. Adams says that with one double unit he can do the work of three hand milkers.

Lack of summer pasture is the most serious handicap to dairying under plains conditions. In favorable years wheat can be pastured in winter and early spring. For the summer pasture Sudan grass is the most promising crop at the present time. Of course, silage will take the place of pasture, but it requires labor to feed it when farm work is pushing and in warm weather silage spoils on top very rapidly and a much thicker layer must be removed daily than in winter feeding. For summer feeding narrow silos must be used. Mr. Adams feeds silage well into the early summer and usually is feeding it again in August.

The state is not putting enough money into the Plains Substation to permit definite and accurate experimental work to be carried on. Its value is more in the nature of a demonstration of what may be accomplished under conditions which almost any plains farmer can meet. The farm is not large enough for plains conditions. A more elaborate test of what may be done with dairying on a dry land farm unit of 160 acres is being conducted at the Fort Hayes branch experiment station in Kansas. There are farmers here and there all over the plains area who have carried out the diversified farming idea with a fair degree of success. When such examples can be pointed to no one can say it cannot be done.

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Do You Want a Herd Bull?

Bulls for Sale—On Pages 22 and 23 you will find offered for sale bulls priced from $120 up. Cash or on terms.

The Rural Household

Questions about home problems promptly answered by letter and through the magazine. Letters from women containing helpful suggestions for improvement of rural life are always welcome. Address all communications to Mary G. Collopy, Editor Home Department, Western Farm Life, Denver, Colo.

May I Come In?

Were you ever invited to make your home with a large, happy family in which you knew only a few of the members? Do you recall how eagerly you hoped that your coming would not be an intrusion, that the family would just let you be one of them? You wanted to help with the work, yet not be "in the way."

That is just the feeling I have as I ask you, "May I come in?" Many of you in Colorado and Wyoming I have met face to face. You have shared delicious potato soup with me and given me a comfortable bed at the end of a day's travel in your community. Now, I want to know all of the family. I want to help with the work, but it is your house, so you must tell me what I can do to give you the most help and satisfaction. There will be many things that I shall not know how to do, so I shall want to feel free to ask members of the family for help.

So again I ask, "May I come in?" May I come into your home as just another woman who has many problems in common with you, who has lived on a farm and knows its problems and its pleasures? May I feel confident that our new relationship will strengthen that spirit of helping others which has been the pride of the Rural Household Department in the past?—Mary G. Collopy.

What Kind of a Woman Am I?

This is the frank question which Marion McLean asks us in the current number of the Delineator. We always know what kind of a woman our neighbor is, or we think we do. In fact, we are so sure of our opinions in that direction that we pass them around freely among the other neighbors. How are we to know just what kind of women we are? Not all of us are blessed with friends who are absolutely frank with us about our own lives. It is left, then, for each of us to conduct our own examination, just as another woman did when she asked—"What Kind of a Woman Am I?"

Am I the kind of a woman who makes fun of her husband before other people?
Or do I consider it no disgrace to be happily married?
Do I know what is going on inside the funny little heads of my children?
Or am I satisfied if they are well-dressed, washed, and behave with reasonable mannerliness before guests?
If the living-room curtains are clean, do I really care much whether the ice-box is scalded out or not?
Am I strictly honest in making out my household accounts?
Or do I sneak in an occasional shampoo under "cleaning" and let it go at that?
Which is more important to me—the smocking on the little girl's dresses or the books they read?
Do I take the job of marriage like a good sport, the worse with the better?
Or do I whine for special consideration because, forsooth, I am a woman?
Can I be a good sport and keep on being one?
Or, after being fine and decent for a while, do I kick over my bucket of milk with a mean dig and then act surprised that no one appreciated the fine quality of milk that I produced?
Do I burn my own smoke?
Or do I discuss my family affairs with my friends?
Would I read a letter that I found in my son's bureau drawer?
Or do I believe that adolescents are people, too?
Do I have my dark-gray blankets washed as often as my white ones?
Why don't I?
Can I keep a confidence?
Or do I go teapotting to my husband with every bit of gossip that turns up?
Do I respect myself and my job, knowing that on the material basis alone a hundred dollars a week would only just replace me in my home?
Or do I sometimes think of myself as a mixture of servant and concubine, with the cringing rebellion of both?
Am I thin and irritable?
Am I fat and flabby?
Or do I keep fit physically and mentally?
Will my children respect me when I am forty-five?
What will I be like when I am sixty?
What kind of a woman am I?—Marion McLean.

My Neighbor's Story.

My neighbor may be within three miles of me, or she may be three thousand miles away. She is a woman, therefore, she is my neighbor. I am interested in her daily life, her struggles and her efforts to overcome them.

Shall we use in each issue a very brief story of some woman we know? Shall we make this a feature of Rural Household? Let us know what you think about this. Send in the story of some woman whose life has been an inspiration to you. Every one of us knows just such a story. Let us start the ball rolling with the following true story:

Mrs. G—, a California neighbor and firm believer in the farm bureau, was elected chairman of the home nursing committee in her community. She was a busy woman, quite lame, and no longer young. The women of her community had never worked together, or played together, for no particular reason, except they never had. Mrs. G— assisted by the county home demonstration agent, organized the class in home nursing. Every woman present was eager for the work.

But where could the meetings be held? The homes were too small to allow a crowd to watch a bed-making demonstration. Various suggestions were made and rejected. Discouragement was freely expressed. "It couldn't be done," they said. Mrs. G— smiled a brave smile, served hot chocolate, and sent the women home with an encouraging, "Just wait."

The following morning she went to the nearby town and tried every conceivable place suggested by her neighbors. Defeat met every attempt. Finally, she went to a former saloonkeeper and presented her problem. His soft-drink business did not require the space needed for his former trade. He showed her a vacant room and she went away in triumph.

The next time I saw Mrs. G— she was surrounded by her neighbors who had come to investigate the new meeting place, a large room with running water, lights, and a demonstration bed donated by the saloonkeeper's wife. The fifteen lessons required by the Red Cross were conducted in this room. Every member of the class now is the proud possessor of a Red Cross certificate in home hygiene—all because Mrs. G— said, "This opportunity may not come our way again. It can be done."

Timely Suggestions.

This is a good time of the year to take stock, as it were, of our belongings. True, we have been very conservative in our buying for some time and we can continue such practices, but we may need some new bedding or towels. Such articles that are in constant use have a habit of wearing out, and now is a good time to make an estimate of how much we may need, and how much of our needs we can afford. It is a good time to repair quilts and comforts and maybe strengthen the worn places in the blankets, so they will do the rest of the season.

Seed catalogs are coming now and what occupation is as pleasant as planning the garden, especially if it is a snowy, blustery day. Prepare to sow plenty of cabbage and tomato seed early; they must have age in order to mature either vegetable. Cabbage makes an important ingredient of so many good pickles, besides the appetizing cold slaw, or cooked as sweet cabbage, or the more plebeian, but nevertheless wholesome kraut. Cabbage is a vegetable that should have a wide use as a food. Its food value is almost equal to that of spinach.

And the toothsome tomato! Well, I just wonder if we don't all know the uses of it, but maybe you don't make the mince meat from it. Mince meat makes fine pies in the winter and smells and tastes like a real "honest to goodness' mince pie and is equally delicious.

It is a good time to get acquainted with our neighbors, these long winter evenings. Go to the popular spelling contests and visit the school and get acquainted with the teacher. Perhaps she is a long distance from home, and just a wee bit lonesome after the holidays spent at home. And then there are the farm bureau meetings. Much information can be learned here for future use. The poultry meetings also furnish us with many new things and gives us "pep" for our summer's work.

And perhaps you are remodeling some furniture. Yes, it can be done, and some paint and enamel can work wonders in making pieces match. The stains are good, but I would hesitate to use them on fine woods like black walnut or cherry. Use a good furniture polish on such pieces, but where one has pieces of soft woods, clean all the old finish off and enamel or stain. A good

strong soda water applied with a brush will loosen up old varnish or paints and if you cannot afford enamels, try the paints. A light gray or cream are both very pretty for furniture—and while you are planning the furniture plan some flower beds. There is a mighty restful feeling, when you are tired, to let your eyes rest on a blooming plant or shrub.

Be sure and make use of the dye-pot and the paint brush when fixing up the house. The expense is not so great and the effect is wonderful.—Mrs. Genie Ostheimer, Burns, Wyo.

Our Fashion Service.

All patterns 12 cents each. Address Western Farm Life, Pattern Department, 1518 Court Place, Denver, Colo.

Read This Before Ordering: Patterns ordered through this magazine are mailed promptly from the factory at Brooklyn, N. Y., and arrive in 10 to 12 days from time order reaches Western Farm Life. Be sure to specify size and number of patterns. Write your name and postoffice address plainly to avoid delay. These patterns are handled at cost, as a service to our women readers. The price of 12 cents includes postage.

3526—Popular Dress Style for Little Miss. It is cut in sizes 4, 6, 8 and 10 years. A 6-year size requires 3⅛ yards of 36-inch material. Serge, henrietta, tricotine, poplin, taffeta, linen, repp, gingham, kindergarten cloth, seersucker and percale are attractive for this model.

3816—Neat Pocket Dress. Even a tiny girl loves a dress with pockets, such as this model portrays. The lines are simple, and the making not difficult. Figured percale, or checked gingham may be selected for this dress, and pique or repp in a contrasting color for the trimming. The pattern is cut in sizes 2, 3, 4 and 5 years. A 3-year size requires 2½ yards of 36-inch material. Collar, cuffs, belt and pockets of contrasting material require ⅝ yard.

3577—Unique Style. Cut in sizes 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires 6¾ yards of 40-inch material. The width of the skirt at the foot is about 2 yards. The sleeve may be finished with or without the cuff portion and the drapery on the skirt may be omitted. The skirt is mounted on body lining. Serge, satin, taffeta, poncee, linen, gingham, sateen and challie could be used for this style.

3840—Blouse, and 3823—Skirt. Interesting Costume. Effective and youthful is this smartly fashioned model, with its simple artistic lines, and comfortable new sleeve. One could wear the blouse with any slip or foundation skirt. As here shown it is combined with a smart two-piece skirt. As illustrated, the blouse may be finished with the fulness held by the belt in straight line effect, or bloused over a sash or girdle of silk or ribbon with loop and ends at the side or a smart bow over the back. Beaded crepe and charmeuse will be attractive for this style. Crepe-de-chine, taffeta, serge, velours and duvetyn are also good. The blouse, 3840, is cut in sizes 34, 36, 38, 40, 42, 44 and 46 inches bust measure. It requires 3⅜ yards of 40-inch material for a medium size. The skirt, 3823, is cut in sizes 26, 28, 30, 32, 34, 36 and 38 inches waist measure. The width of the skirt at the foot is about 2¼ yards. It requires 2¾ yards of 44-inch material for a medium size. If desired the blouse may be finished in skirt length, thus forming a very pleasing chemise dress. Any slip or skirt may be used in place of the skirt illustrated. This illustration calls for TWO separate patterns.

3820—Splendid Model for a Junior. This long-waisted frock is just right for the growing girl. It lends itself well to any of the materials now in vogue, and may be trimmed with braid, embroidery, braiding or contrasting material. The sleeve may be finished in wrist or in elbow length. The waist fulness may be held with a belt, sash or string girdle. Pattern cut in sizes 12, 14 and 16 years. A 14-year size requires 3¼ yards of 36-inch material.

3815—Popular One-Piece Model. This makes a very comfortable school dress and one especially attractive for slender figures. One could have this in striped or checked gingham, serge, prunella, velvet, taffeta, poplin, twill or jersey cloth. Pattern is cut in sizes 8, 10, 12 and 14 years. A 12-year size requires 3⅜ yards of 44-inch material.

3811—Practical Work Apron. For anything that spells service or occupation, this model will prove convenient and comfortable as a protector for the dress over which it may be worn. Gingham, percale, sateen, rubberized cloth, sanitas, drill, repp, lawn, crash, cretonne and calico are all good materials for this style. The under-arm closing simplifies laundering. Cut in sizes, small, 34—36; medium, 38—40; large, 42—44; extra large, 46—48 inches bust measure. Medium size requires 3⅛ yards of 36-inch material.

3812 — New Straight Line Frock. Charming simplicity is featured in this pleasing style. The panels add length and becoming fullness. The closing is invisible at the left side of the front panel. This is a good design for remodeling. Satin and serge, plain and figured silk could be here combined. As illustrated, Canton crepe, in a new shade of brown, was used, with a decoration of novelty braid. Cut in sizes 16, 18, 20 years. An 18-year size requires 4¾ yards of 27-inch material.

New Fashion Catalogue.

The new Spring and Summer 1922 fashion catalogue is ready for distribution. The cost is 15c. This catalogue contains 500 designs of ladies', misses' and children's patterns, showing colored plates and giving a concise and comprehensive article on dressmaking and also some points for the needle. Various simple stitches are illustrated and there are valuable hints to the home dressmaker. The catalogue is unusually complete and up to date and is being sold at the old rate of 15 cents. Send silver or stamps with order to Pattern Department, Western Farm Life, Denver, Colo.

Who's Pattern Order?

Order for patterns 3258, medium, and 3302-36, Salt Lake City, has been received, but the writer failed to sign name. Kindly send us name and address and patterns will then be ordered.

What Is the Future Prospect for Land Values?

(Continued from Page 5).

last figures a year ago. The chart shows only the decline in the official estimate.

What will be the future course of land prices? Will the decline now under way continue, or will values become stabilized around the present level, or will the upward course be resumed?

At the present time land values are unsettled, with few farms changing hands. No one wishes to purchase land at high prices if farm products are to stay down. Land has declined much less than grain and livestock. The old relationship which existed from 1899 to 1914 has been lost. Cash rents for 1921 are probably 50 per cent higher than before the war, while prices paid to farmers for their products are no higher than the pre-war level. Land and rents must come down, or farm products must go up.

Looking far ahead, it is not improbable that land prices sometime will return again to the high point at the crest of the boom. Population will become more dense, the demand for farm products will increase, methods of farming will become more effective, permanent improvement will be constructed on the farms and in the community. These and most of the other factors which helped to advance land prices in the past will continue to operate. But a generation or two may be required before the level of land prices of a year ago is restored.

Land Values Absorb "Profits."

As we have seen, any factor which increases profits in farming tends ultimately to raise the price of land. Such increases in land value necessarily raise the land charges in the form of interest and taxes to be counted in subsequent costs of production. These charges in turn tend to swallow up what would have been profits. As a result, over long periods farming seldom shows any "profits" above costs of production, even though land values may be rising all the time and the net worth of farmers may show a big increase. This, by the way, is one of the difficulties to be overcome in a "cost-plus" plan as applied to farming.

The tendency for land values to advance and absorb the lion's share of any economic betterments in the position of the farmer, is almost as old as agriculture itself. Some students of rural economy even claim that farm poverty is due chiefly to overcapitalization of the land. It is not difficult to plead the farmer's defense in the matter, as the tendency would express itself through speculative buyers of land no matter what actual working farmers should do to prevent it.

We can be sure also from a practical viewpoint that, as long as our present economic scheme of land tenure persists, this tendency on the part of land values will remain. For example, the measures now being devised by farm organizations in marketing, legislation, finance or otherwise to improve the farmers' position will exert an influence in the direction of sustaining or advancing land values.

It may be possible, however, to correct one troublesome factor. Farmers in the past have been prone to underestimate costs of production aside from rent, and thus to overestimate the earning capacity of the land itself. They have overlooked the labor of the members of the family, or depreciation on buildings, machinery, and even depreciation of the land itself. With these items excluded or counted at less than their full worth, cost marks which were too low were obtained, and farmers have been willing to pay too much for land. A better understanding of farm accountancy so that the full economic cost of production will be appreciated, should help to correct the habit of overestimating what land is worth.

Putting the price of land too high harms chiefly the farmer. The sufferers from the aftermath of the recent land boom are the young people, the renters, and others of small means who invested their savings in land under the mistaken notion that prices would stay high indefinitely and whose finances were snuffed out by the decline in both farm products and farm lands. Other farmers may have had their taxes advanced and there may be still other disadvantages which will persist for a while. On the other hand, no actual farmer is harmed if his land is priced too low, nor is society the loser.

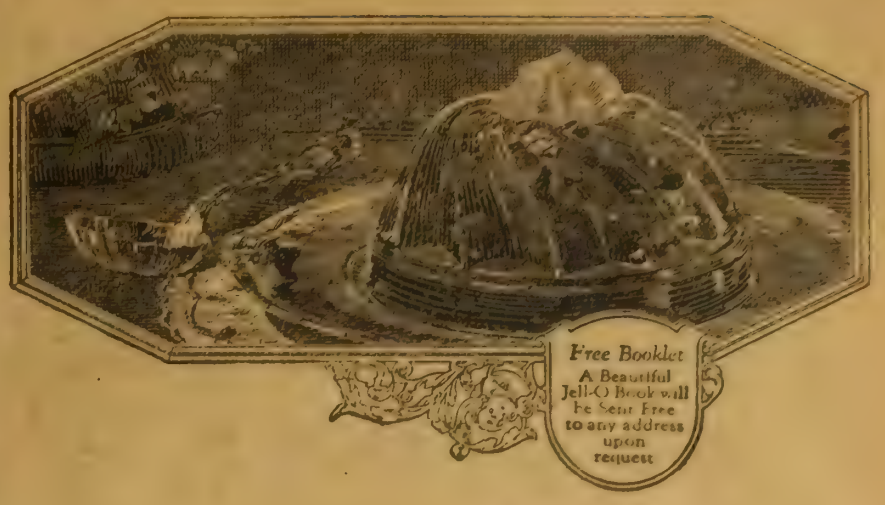
Actual farmers do not want land values to be higher than the price of farm products justifies, after all the other elements in the full economic cost of production are satisfied. Nor is it desirable that they should receive a part of their income from farming in the form of a gradual advance in land values, if these values advance above the point at which the prevailing cash or crop-share rent will pay taxes and a fair rate of interest on the valuation. The farmer or landowner whose land, purchased for $50 an acre, later rises to $250, is better off even if he gets only 2 per cent on the higher valuation; but when he retires and the land is bought by a farmer who must pay for it from the produce, this man must labor unduly hard and pull his family and himself down to a low standard of living. He is the individual who is hurt.

In brief, there are factors at work which will again advance land values in the United States, but it is highly undesirable that they should advance more rapidly than the earning power of the land really justifies.

This is the first of a series of articles by Mr. Gusler. The next will appear in an early issue.—Editor.

Jacksing: "What's de keerless-like ideah of appearin' in public wif yo' pants suppohted by on'y half a pair o' suspenders, big boy?"

Johnsing: "Where'at does yo' get dat stuff? Dis here innovation am a Sam Browne suspender, fellah!"



A DESSERT—to be right—should not be a heavy course. It should be light and easy to digest, and at the same time, good.

That is Jell-O. It rounds out a meal with a satisfying sweet touch that appeals to every member of the family. A pleasant dessert makes the entire meal seem "special." It is remembered for a long time.

The American Offices and Factory of the Genesee Pure Food Company are at Le Roy, New York, in the famous Genesee Valley Country.

The Offices and Factory of The Genesee Pure Food Company of Canada, Ltd., are at Bridgeburg, Ontario, on the Niagara River.

JELL-O

America's Most Famous Dessert

Frantz's Famous Winter-Laying Leghorns

500 Pullets Laid 22,660 Eggs *In November December January*

(While other breeds and strains were boarding free.)

We sold the eggs on the market for $1,400 and produced them with $250 worth of feeds. $1,150 Profit in 3 Months. They Will Do the Same for You, as they have done for Thousands and Thousands of others.

Mrs. Kelly McEndoffer, Denver, sold $2,100 worth of eggs from 325 pullets in one year.

A. V. Brooks, California, gave our stock a trial last year. It proved more than good, and this season he wired for 7,200 hatching eggs.

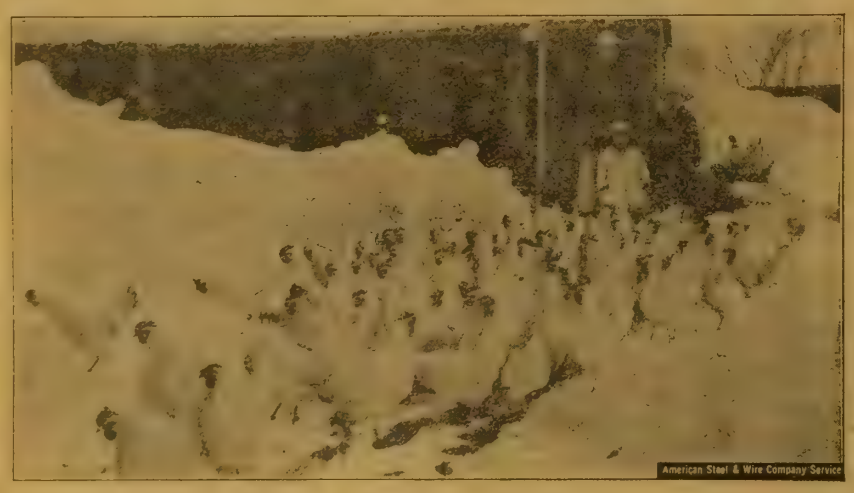
A Kansas City man sold $75 worth of eggs daily in winter from less than 2,000 pullets; feed cost per day, $20.

E. Lambuth, Canon City, also sold $2,200 worth of **winter eggs** from 750 pullets in 4 months.

J. L. Safeblade, Illinois, gathered 246 eggs in December from 12 pullets

We have more than proven our claims, and if you want the WINTER EGGS AND BIG PROFITS you MUST HAVE FRANTZ'S WINTER LAYING LEGHORNS. RESULTS ARE CERTAIN when purchased direct from us. GUARANTEED FERTILE HATCHING EGGS and 50,000 STRONG CHICKS alive at your door at prices you are SURE to make big profits. Come and see us. Write

Osee C. Frantz, Box F, Rocky Ford, Colo.



Blakeland Business Leghorns.

This flock of 100 pullets laid 80 eggs several days in succession during zero weather. 24 pullets from same strain, hatched May 15, laid their first egg when 4 months and 18 days old. They laid a total of 4,804 eggs in 365 days. These eggs brought $191.92, or $8.33 average per bird. The highest record pullet from that flock produced 272 eggs. Our highest record pullet for 1921 laid 292 eggs. **The foundation for such a business cannot be bought for a song. Our prices are reasonable. Let Blakeland start you right. Blakeland stands for Quality FIRST, LAST, ALWAYS!**

BLAKELAND EXHIBITION LEGHORNS
BLAKELAND BUSINESS LEGHORNS

Write for Catalogue B.

BLAKELAND FARMS, Littleton, Colo.

PLACE Your Order Now for **EGGS OR BABY CHICKS**
From Our Bred-to-Lay

S. C. W. LEGHORNS

The FOWLER EGG FARM STRAIN OF LEGHORNS has been bred for eggs, Hoganized and type-tested for so many years that they will give you a LARGER FLOCK AVERAGE of big white eggs and make you more real money than any other strain of Leghorns in the west. Our customers say so when sending back year after year for more eggs and chicks from The Fowler Egg Farm. A customer at Avondale, Colo., writes: "Can I get 500 chicks in March? I bought 500 from you last year; raised 238 pullets and 221 cockerels. I had 2,000 chicks in all from four other poultry farms. Your chicks were by far the best and healthiest that I received. I cannot say too much for the QUALITY of your stock, they are just as fine as can be had." These kind of letters and repeat orders are what count. There is a reason.

After many years of special breeding and selecting for increased egg production we have developed a strain of extra large Leghorns that lay big white eggs. Our pullets mature quick, start laying at 4 months and 18 days and weighing 4 to 5 pounds in less than 9 months. The long deep bodied kind with large looped and folding combs. You cannot get better laying stock at twice our prices, no matter where you go. Write for Catalog, prices and facts from customers before you buy eggs or chicks. Its free and tells all. Write

FOWLER EGG FARM, Route 1-B, Fowler, Colo.

SUNRISE S. C. WHITE LEGHORNS

Bred for heavy winter egg production, and they do it. 100 pullets laid in the three winter months 4,848 eggs, and better results later. You can do the same when the winter egg is bred in them. Give our winter-laying Leghorns a chance and you will be convinced. Write now and get our price list on guaranteed fertile hatching eggs and husky strong baby chicks that will live from free range flocks. We have a few matured cockerels for this year's breeding for sale, from $2 up to $5.

SUNRISE POULTRY FARM.
F. W. Stanbridge & Son, R. R. 3, Rocky Ford, Colo.

Profitable Farm Poultry

W. E. VAPLON.

Questions about the farm flock promptly answered by letter. Free advice on all phases of poultry production. Address all inquiries to Poultry Department, Western Farm Life, Denver, Colorado.

"Mamma, where do eggs come from?"

"From the chickens, my dear."

"Well, mamma, that's funny; papa said that chickens came from eggs."

Remember that the early-hatched chicks come from the early eggs and consequently are liable to be more vigorous than the later ones.

A young married woman who moved into the country considered the keeping of hens a pleasant and profitable undertaking. As she grew more absorbed in the pursuit her enthusiasm increased.

During one of her animated descriptions of her success a friend inquired: "Are your birds good laying hens?"

"Oh, yes," she replied, in a delighted tone, "they haven't laid a bad egg yet!"

If for any reason you are medicating the drinking water for your laying hens, it is always well to add the material to the water early in the morning. About 10 or 11 o'clock remove the medicated water and provide pure water. By doing this the hens which do not drink enough of the medicated water will not go thirsty long enough to seriously reduce their egg production.

There is nearly always a tendency when good profits have been obtained from a flock of hens to overcrowd them in the houses. If a house will accommodate comfortably a flock of 75 hens, these usually will give as great a total profit as 125 in the same house. Keep this in mind when planning for an increase in the size of the poultry business on the farm.

Skimmed milk is one of the best possible additions to the ration for either grown hens or baby chicks and it can be given either sweet or sour, but it is usually best to use sour milk. The principle reason is that it stays "as is" better than sweet milk. The difficulty is in changing from sweet to sour and back again. Regardless of whether you feed sweet or sour milk the containers should always be kept clean.

Hen Has Sore Feet.

I have a buff Leghorn hen that has sore feet all the time. They are puffed and hard corns on the outside and when I gouge them out they bleed. She has been this way three or four months. I think she is very fat and seems healthy in every way except her feet. It is sandy around here and my chicken house has a dirt floor and I keep ashes on the ground, so I don't know where she could hurt her feet by jumping on hard ground. I hope you can give me a remedy. I also had one or two hens bothered with diarrhea this fall. Is there any cure for it? —E. N. L., New Mexico.

Probably the sore feet were caused by bruising, most likely by jumping from a height on a rock, or by a cut; constant jumping from the roost aggravated the wound. The only thing we can suggest is to place the hen in a box or coop where there are no roosts until the swellings are entirely gone and the wounds healed. In case of an epidemic of diarrhea in the flock give a teaspoonful of Epsom salts, in mash, to every three grown fowls every other day for a week. Have broken charcoal before the flock all the time.—W. E. V.

Starting in Chicken Business.

I am thinking of going into the chicken business in a small way and wondered if you could tell me where to get some literature on the subject. Thought possibly the college had published some bulletins that are available. I'll need all the information I can get, as I know very little about chickens.—I. W. V., Conejos County, Colo.

Write to the Department of Agriculture, Washington, D. C., also the State Agricultural College, Ft. Collins, Colo., asking them for all their bulletins bearing on the subject of poultry. These will give you much information. Experience will give you more, especially the experience of others, and we would advise a visit to operating poultry plants before investing too heavily. Will be glad to give you any information we may have.—W. E. V.

When Should Pullets Lay?

How old should pullets be before they are to lay? What are the proper grains and feeds to give them in the winter time? I have 25 pullets hatched last June. They are the Rhode Island Reds and Leghorn mixed. My hen house is 10x12, warm, with light. They also run in the barn during cold, snowy days. When the weather is nice they have a large corral to run in and scratch. These hens are all healthy and I see no reason why they have not started laying.—W. R. M., Wyoming.

Pullets must be fully developed before they will do the egg basket much good. They should be hatched in late March or early April and be given the best of care to get into full lay in November and December, in your country. Feed wheat and corn, root crops or alfalfa leaves, milk or some form of meat. Whole grain in litter to induce exercise, ground grains in the form of a warm, wet mash. Pullets may be fed liberally. —W. E. V.

Weight of Ducks and Geese.

Where can I get large Toulouse geese and ganders? What should be the weight of each of them to be as large as they should be to be purebreds? Also, where can I get the mammoth white Pekin ducks and drakes?—T. E. T., Saguache County, Colo.

You will be perfectly safe in ordering stock advertised in Western Farm Life. We are giving you the weights called for by the American Poultry Association:

Toulouse Geese—Adult gander, 25 lbs.; young gander, 20 lbs.; adult goose, 20 lbs.; young goose, 16 lbs.

Pekin Ducks—Adult drake, 9 lbs.; young drake, 8 lbs.; adult duck, 8 lbs.; young duck, 7 lbs.—W. E. V.

Egg-Producing Feeds.

Of what food value as far as egg production is concerned, are turnips, beets and rutabagas, and how should they be fed—cooked or raw? Will bones that have been cooked, then ground, aid materially in egg production?—E. M. J., Wyoming.

I am quoting the figures showing the dry matter, nutrient and fuel value in the vegetables you mention in your letter; also the nutritive ratio. In comparison to this, I am quoting the figures for corn and wheat:

	Dry Matter.	Ash.	Protein.	Carbohydrates.
Turnips	.095	.008	.0081	.0646
Beets	.091	.010	.0103	.0565
Wheat	.895	.018	.1023	.6921
Corn	.891	.015	.0714	.6612

	Fat.	Fuel Value.	Nutritive Ratio.
Turnips	.0011	1.40	1:8.3
Beets	.0011	1.29	1:5.7
Wheat	.0618	1548	1:7.1
Corn	.0497	1572	1:10.8

In our estimation, the big value of vegetables in the diet is in their succulence and in the variety they offer, especially where they must take the place of greens of summer. We certainly like cooked vegetables as a winter feed and mixed with ground grains. The only objection we have is the labor involved. Where labor is an item to be considered, we would feed them raw entirely, throwing the vegetables in whole and compelling the fowls to cut them up themselves. Anything that can be fed fowls that adds to the variety is directly or indirectly an aid to filling the egg basket. On the other hand, all the foods and variety in the world given to hens at this time of year will not do much toward that end, and where forced feeding is practiced, will cause more or less damage. Do not misunderstand us. We mean that the egg basket must be taken care of at this season of the year by the pullet, the hen being out of commission for the next two or three months; and where hens and pullets run together in the same flock, and the pullets are forced for egg production by heavy feeding, especially if the feed given is easily obtained by them, an overfed condition must prevail in hens. It is exactly the same condition as would obtain in a herd of dairy cattle, where cows giving heavy flow of milk are fed heavily for that milk, and the cows that are dry are given the same heavy feeding.

Big Idaho Poultry Record.

A profit of $6.88 a hen was obtained from a flock of White Leghorns owned by Wm. Pyle of Gooding, Idaho, according to the county agent of Gooding county. This is an unusual record and is probably more than the average farm poultry producer can expect, but it indicates the possibilities with well-bred poultry given proper care.

This flock of 72 hens laid in the 240-day period ending August 31, 1921, 12,173 eggs, an average of 170 a hen. The records of receipts show 9,090 eggs sold, $268.27; 1,424 eggs used on the

table, $32.80; 330 day-old chicks, $57.50; 220 fries sold, $114.90; 27 fries for table, $12.85; 30 capons on hand, $18.00; 205 pullets on hand, $153.75, a total of $658.07. The total feed bill, including milk, was $133.90; 44 gallons of kerosene used for incubators and brooders, $14.00; incidentals, $16.30, a total of $161.20, leaving a profit of $496.87. Labor and interest on equipment are not included in the expense.

Farm Poultry Producers Tell of Their Successes.

(Continued from Page 4.)

In the chicken house, the broody hens were set in the barn.

We got 260 chickens from 360 effs. Seven settings were a total failure due to work which was done near the nests, disturbing the hens. There was very little disease among the baby chicks which were raised with hens, the hens being confined in coops while the chicks had the run of the barn. I lost some, but weather became warmer early in April and I was able to get them outdoors more and they did splendidly afterwards and I lost very few.

Using the barn was not satisfactory and I decided to double the capacity of my chickens house. We now have a house 48x14 feet. The original 24-foot portion I now use as a laying house, 8x14 feet as a brooder room, and 16x14 feet for turkeys. In the spring when I have only the breeding turkeys I partition off a space from that room for my setting hens. I now have three setting there. Two others came off January 21 with twenty chicks, which I have moved into the brooder room. The work this spring will be much easier and more effective than last.

From my flock of 260 baby chicks 200 came to maturity. I do not feed my chicks till they are 48 hours old, then I give rolled oats, hershey seed, cracked corn, and kafir when they are a little older. Grit, water, skim milk and bran are before them all the time with plenty of fine litter to scratch in and I get them outdoors as soon as possible. The hens are powdered every week with sodium fluoride and the coops are disinfected every two weeks. I have never used an incubator or brooder, as my flock has not as yet been too large to handle with hens.

The laying hens have a stock of hershey grass near the chicken house, where they can scratch the greater part of the year. They also feed around the stacks of kafir, cane, and corn, and where the cattle are fed. I always scatter a basket of kafir heads in the litter of their house at night so they will have scratching to do in the morning before they are let out, which is not very early on account of coyotes. When the temperature is hovering around zero I keep them in all day and feed kafir and hershey in the morning and corn in the afternoon, giving them tepid water instead of cold. The water pails are washed out every morning and scalded occasionally. There is oyster shell and skimmed milk before them all the time and ground potato parings and citron cut up small for greens. They get plenty of charcoal from the ashes I carry out. The dropping boards are cleaned every morning so there are no bad odors or dampness. The houses are sprayed frequently to keep down mites.

I lost only three hens during the year from disease, two with acute diarrhea during a hot spell and one with some slow wasting disease.

My plans and hopes for the coming year are to try hard to do as well in proportion with 150 hens as I did last year with 90, to raise if possible twenty pullets so that I may start the next year with 300 hens. I never keep hens more than two years. I band them every other year so that the 2-year-old ones can be marketed before legbanding the pullets. I get fresh blood into the flock every year, usually by getting some hatching eggs from a reliable breeder. I have made arrangements this year to sell direct to a Denver retailer who bought from one of my neighbors last year and so hope to make a better profit.—Mrs. E. K. Fowler, Cheyenne Wells, Colo.

Chickens Kept the Family.

THIRD PRIZE LETTER.

After seven years of experience with poultry I am convinced there is money in the business and that elaborate buildings are not essential, though comfortable draught-proof, well ventilated buildings with plenty of floor space, are as necessary as standard bred-to-lay stock. Entering the winter of 1918 with 300 hens, I sold above feeding and other expenses that winter and the spring and summer following, market eggs, chickens, baby chicks and setting eggs amounting to $596.47.

The following winter I tried to keep 400 hens in the same building and found it didn't pay. You cannot crowd them! I find that to get results I must have good stock and comfortable buildings, a variety of grains, feed a mash, an abundance of clean water and last but not least, the hens must be kept busy and happy.

Seven years ago I bought 100 pure-bred Brown Leghorn setting eggs and hatched out nine chicks, three of which were pullets. The following spring, 1916, I put a splendid cockerel from a heavy laying strain with the pullets and raised 48 pullets. That fall we moved to a dry land farm about fifteen miles southeast of Greeley, Colo. The only hen house on the place was a half dugout 16x14 feet, in poor condition. Husband was busy and had neither interest nor faith in chickens as our mixed flock had scarcely paid for their board, so I knew if anything was done with that building I'd have to do it myself.

While hubby was away from home I banked that building to the eaves with dirt, and covered the large south window with netting. I then covered the floor with a foot of bright straw and put the little brown hens in their new home. I fed them equal parts of cracked corn, wheat, and barley, in the litter twice a day and kept a mash of equal parts of bran, shorts, corn meal and ground oats before them at all times. I fed milk instead of meat scraps and prefer it now. For greens I used steamed alfalfa leaves and mangels alternately.

Oyster shell and charcoal I fed in hoppers and on cold days I was careful to see that the chill was off their water. And how those hens did lay while all the neighbors' hens were loafing! In the spring I had more unsolicited orders for stock and setting eggs than I could fill, so I determined to hatch out all the chicks possible.

Husband was skeptical, but he built me a scratch pen 10x10 feet adjoining the half dugout on the west and into it the following fall I put 200 hens and fancied my fortune made. Alas! I had much to learn. Those hens didn't lay at all, though I followed my former methods as to feeding. Soon roup broke out among them and I lost 100 hens. The following summer 1918 I coaxed husband to build me a hen house and he finally consented, using some second hand lumber. When it was finished I could see daylight through it anywhere, so I covered it with tar paper and banked the north side with dirt. This building was 10x20 feet, open front.

My baby chicks I hatch with an incubator and raise with a coal-burning brooder stove. I remove them from the incubator when they are 24 hours old, and when they are 48 hours old feed them sour milk. This does away with bowel trouble. Their first feed, two hours later, consists of hard boiled eggs, infertile eggs from the incubator, and equal parts of bran and chop. When they are a week old I begin feeding any good commercial chick feed.

I feed all the cut alfalfa they will eat daily. Husband now says, "Yes, chickens pay. They have kept the family during the hail and drouth for the last three years."—Mrs. Maude Hanson, La Salle, Colo.

Angora Goats Clear Brush.

The Angora goat, disease resistant, thriving on the twigs, buds, and leaves of brush and on other detrimental plants, and supplying excellent meat and highly useful hair and skins, is still unknown to most people of this country which is one of the largest raisers of Angoras in the world. These are a few of the interesting facts brought out in a recent Farmers' Bulletin 1203, "The Angora Goat," published by the United States Department of Agriculture, which contains detailed information about these useful animals, from a brief history of their development down to management of goat ranches, the marketing of mohair, and the treatment of diseases.

Texas is the leading goat-raising region of the United States, having more Angoras than all other states combined. Conditions of topography, altitude, climate, and price of land have all joined to help make the ranches successful. Open-brush range, similar to that in Texas, makes the remaining part of the southwest second in Angora ranging. Many fine orchards in the northwest stand on land that was brushed off by the goats.

The bulletin may be obtained free by addressing the Department of Agriculture at Washington, D. C.

TOWNSEND FARM

Formerly Mountain View Poultry Farm

Annual Clearance Sale

WE HAVE A SURPLUS STOCK OF

Cocks, Cockerels, Hens and Pullets, in S. C. R. I. Reds, S. C. Buff Orpingtons and White Plymouth Rocks.

These birds are of the same general quality as those that won best display in each of these varieties in the recent Stock Show at Denver. We believe they will improve the quality of any flock in the west. We have about 300 of these birds to dispose of, which consist of the choice of about 4,000 chicks after very careful selection under the advices of the best poultry experts of America.

We offer these birds for sale at reasonable prices. No bird shall leave our place that does not possess creditable quality. Our principal aim is to have these birds distributed among the worthy poultry breeders of the west.

This announcement is not intended as an advertisement, but as an invitation to the poultry men of the west to share in some of the qualities of our stock.

TOWNSEND FARM, Edgewater, Colo.

ANCONAS for Profit

The fellow who wears the BROADEST SMILE and the BIGGEST BANK ROLL now-adays is the ANCONA MAN. Never before has there been so many folks taking up POULTRY as a BUSINESS PROPOSITION, and the CENTER of INTEREST is the S. C. ANCONA—the greatest business hen ever known.

Don't take our word for it, we invite you to do as many others are doing, TRY THEM OUT with any other breed on earth. No matter what fowl you are now breeding, TRY S. C. ANCONAS BESIDES THEM and be convinced just as we were a few years ago that S. C. ANCONA is the BIGGEST LITTLE MONEY MAKER of the age.

THE PUBLIC WANTS THEM—Are you in a position to supply the demand in your territory? If not, write us. We will mail you our free catalogue, giving you valuable information concerning the breed, our methods, and our strain of trap-nested and pedigreed Anconas—the

Leading Exhibition Strain of the West

JUST WON AT THE NATIONAL WESTERN—First cock, first hen, first, second and third cockerels, and first and second pullets. No pens entered.

Our strain is bred for EGGS by the only reliable method—the TRAP NEST.

BABY CHICKS AND HATCHING EGGS in any quantity, at PRE-WAR PRICES. We can sell you QUALITY chicks, as low as most hatcheries sell chicks from bought-up market eggs of unknown quality. Book orders at once, and avoid being disappointed.

Great Western Poultry Farm

Box F. Rocky Ford, Colo.

ANNOUNCEMENT

ROMOCO POULTRY FARM

LITTLETON, COLO.

We take pleasure in announcing that Mr. George M. Littler, well known Breeder and Showman of Rhode Island Reds, has joined the staff of Romoco Poultry Farm.

The Littler Strain of Show Winning Reds are now added to Romoco Breeding Pens.

ROMOCO CAN SUPPLY YOU WITH THE BEST SHOW WINNERS OR UTILITY REDS S. C. OR R. C.

Prices on Request—Write for Catalogue W.

Western Agents for Darling's Meat Crisps, Romoco Mash, Poorman's Famous Feather Brooders.

THEY RAISE THE CHICKS. NO COAL—NO OIL—NO NIGHT WATCHING. $5 for Feather Board—75-chick capacity. No upkeep and they last for years.

BABY CHICKS AND HATCHING EGGS

FROM MERK'S FAMOUS STRAIN OF S. C. WHITE LEGHORNS.

That have the laying habit bred into them through years of patient selecting and careful mating, and have the vitality to maintain it. Send for circular and price list. We guarantee to please you and our prices will surprise you.

Merk's Poultry Farm

Box W. ROCKY FORD, COLO.

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ARVADA, COLORADO.

Has developed a strain of all-year laying Single Comb Rhode Island Reds that will lift your mortgage and put you in the way of making money with poultry. **Descriptive Booklet on Request.**

STOCK, EGGS FOR HATCHING, BABY CHICKS.

Farmers' and Stockmens' Exchange

Advertisements will be inserted in this department for 7c per word; four or more insertions, 5c a word each insertion. Remittances can be made by postoffice money order or personal check. Advertisements are set in uniform style, no display type or illustrations admitted under any circumstances. Every figure and initial counts as one word. Guaranteed circulation over 55,000 copies each issue. WESTERN FARM LIFE is issued semi-monthly the first and fifteenth of each month. Advertising copy for this department must reach us ten days before date of issue. It carries the most classified advertising because it gives you best results. Send us in a trial advertisement. Write for proof showing how these columns pay advertisers.

POULTRY

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WHITE ROCK COCKERELS FOR SALE, $5. Mrs. Newton King, Cedaredge, Colo.

PURE BARRED ROCK COCKERELS—$2 AND $3; none better. A. J. Joslyn, Gillette, Wyo.

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300 BIG FINE BARRED ROCK COCKERELS; pullets $5 up; utility, show birds. Dr. Flippin, Stromsburg, Nebr.

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PUREBRED SINGLE COMB ANCONA CHICKS, $18 hundred; eggs, $8. Walter Pierce, Chapman, Kan., Route 3.

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GUARANTEED BABY CHICKS—12 STANDARD varieties; prices reasonable; free catalogue. Fike Poultry Farm, Plainville, Kan.

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BABY CHICKS—I CAN DELIVER FEBRUARY 22, Red babies, both combs, and Barred Rocks at $22 per 100. Champney's Poultry Yards, 2057 So. Broadway, Denver.

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BABY CHICKS—LEADING VARIETIES; PRICES reasonable, 20% discount on orders before April 1 and April and May deliveries. Rose Comb Brown Leghorns our specialty. Circular free. Biven's Poultry Farm, Juniata, Neb.

COLUMBIA HATCHERY, P. O. BOX 1102, DENver, Colo. We can supply you with any quantity of baby chicks. Capacity 10,000 weekly; 17 varieties; live delivery guaranteed; parcel post prepaid. Write for prices and full particulars.

IF IT WEARS FEATHERS WE HAVE IT OR will get it for you. Spangled Hamburgs. March hatch Barred Rock and White Wyandotte pullets. Extra choice lot cockerels priced right. Champney's Poultry Yards, 2057 S. Broadway, Denver.

"PREMIER STRAIN" R. I. REDS, BOTH COMBS, win again as usual, both state and district 5 meet. Stock, chicks and eggs. Also "Tom Barron" S. C. W. Leghorns. Sevo Egg Preserver. LaBelle Poultry Ranch, 8th and Dayton, Aurora, Colo.

PUREBRED BABY CHICKS—PRICES ARE down; Barred White and Buff Rocks, S. C. and R. C. Reds, White Wyandottes, Buff Orpingtons, S. C. Black Minorcas, $18 per 100; S. C. White Leghorns and Anconas, $16 per 100; prepaid parcel post. Kansas Poultry Co., Norton, Kans.

BABY CHICKS—HATCHED FROM THE BEST Hoganized laying flocks in Colorado, and every one has a good chance to live and make you money. Every one hatched in our Denver hatchery, capacity 38,000 eggs. Non-freeze founts, keep water warm and make hens lay more eggs. Tell us your wants. The Denver Incubator Co. & Hatchery, 173 S. Broadway, Denver, Colo.

J. A. TRACY POULTRY FARMS, 2520 SOUTH Clayton, Denver, South 337. Pay 2c lb. above market for country shipments live poultry. Extra prices for graded, clean, fresh eggs. We offer high-grade baby chicks at prices below. You cannot buy better chicks at any price:

	Per 50.	Per 100.	Per 500
Asstd. Broilers	$7.00	$13.00	$62.50
S. C. W. Leghorns	8.00	15.00	72.00
S. C. B. Leghorns	8.00	15.00	72.00
Anconas	8.50	16.50	77.50
Barred Rocks	9.00	17.00	82.50
S. C. R. I. Reds	9.50	18.00	87.50
R. C. R. I. Reds	9.50	18.00	87.50
Black Minorcas	9.50	18.00	87.50
White Wyandottes	10.00	19.00	92.50
White Rocks	10.00	19.00	92.50
Buff Orpingtons	10.50	20.00	97.50

Best strains, farm raised, good stuff. You need pay high prices no more. Have some fine Barred Rock cockerels, $5 each. Hatching eggs, any breed, $6 per hundred, or incubator lots. If you have $500 to $1,000, get in the egg, cream, poultry business with our company. J. A. Tracy, Poultryman, Fort Morgan, Colo.

CHAMPNEY'S QUALITY BABY CHIX—TO MY many customers and prospective new ones, beg to state I shall open the 1922 season about Feb. 14, and am prepared to book orders for this or later dates. Payment of 10% of your order secures booking. Generally speaking, prices will rule lower for the coming season; the earliest hatches will sell at about $22 for 100 lots. My chix will be fully up to the standard maintained during my quarter of a century in the poultry business, and the one word quality will be the "slogan" of all chix sent out. I want your business on these lines and will keep my end up. Champney's Poultry Yards, 2057 S. Broadway, Denver, Colo.

TURKEYS.

IDEAL MAMMOTH BRONZE UNRELATED TOMS, 20—32 lbs., $10—$20; hens, $6—$8. Scott Linville, Lamar, Colo.

MAMMOTH BRONZE—TOMS, 20 TO 45 LBS., $10—$35; 15-lb. pullets, $8. Laura Ullom, Route 2, Lamar, Colo.

BRONZE TURKEYS, NATIONAL WESTERN AND Heart of America winners. Brown Chinese Geese. Cora DeFrance, Berthoud, Colo.

MAMMOTH BRONZE YOUNG TOMS, 22 TO 30 lbs., $15 to $18, June and July hatch. Hens, 13 to 20 lbs., $10 to $15 each. Wm. Draves, Lemoyne, Neb.

DUCKS AND GEESE.

LARGE GRAY FARM GEESE, $3 EACH. GUS Koch, Hershey, Neb.

WHITE CHINESE GOOSE EGGS, 40c; GANDERS, $3.50. White Runner baby ducks, eggs. Vivian Anderson, Oswego, Kan.

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QUEEN INCUBATORS, QUEEN COAL BURNING brooder stoves. Carbola, white wash, leg bands, feed hoppers and water fountains. Write for circular and complete description. G. R. McClure, McPherson, Kan.

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LIVE STOCK

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INVENTIONS.

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The Hens That Lay Are the Hens That Pay.

(Continued from Page 4.)

the readers of Western Farm Life of the profits of farm poultry than anything I can write.

The farmer is the big money producer in the poultry world, largely because of the low cost of production—the farm hen getting the most of her living by rustling, and her housing and care amounting to little, and because of the fact that there are so many thousands of farmers and practically all keep poultry flocks, while strictly commercial poultry farms are comparatively few. Taking up the matter from the farmer's standpoint, some facts gleaned from reports sent out by the Iowa agricultural college will be of interest.

The reason most farmers contend that the hen is a nuisance, doesn't pay, and had better be run off the farm, is that they do not exactly know just what she is doing, and will never know without keeping books. These Iowa farmers are keeping books, and the figures speak for themselves. These figures are not given as a comparison of breeds, but just to show, in plain, definite figures, what the hen on a farm is capable of doing under proper conditions. These farm flocks, numbering several scores, have all been culled. The fact that the owners are keeping careful records shows their interest in the flock, and undoubtedly because of this they are giving them better attention and care than the average farmer. It is plainly shown that the farm flock is capable of profitable production during the winter months.

The Iowa reports show that in the month of December, 1921, 4,187 Single Comb Rhode Island Reds laid 21,601 eggs, an average of approximately five eggs to the fowl. We do not know by the records just what proportion of pullets and hens constituted these flocks, except in a few cases where pullets are mentioned. It would be interesting to know this and extremely interesting to know just what feeds were used, but here are further facts: One pen of 80 hens averaged 49.3 per cent egg production, which means that approximately one egg was received daily from every two hens. The term "per cent" as applied to egg production means that when a 50 per cent egg production is mentioned, 50 per cent of the hens laid each day. The second best pen, of 127 pullets, averaged 40 per cent egg production. The pen showing the poorest record averaged but 5 per cent a day for each 100 fowls.

Skipping to the Barred Rocks, 3,734 fowls laid in December 11,134 eggs, an average of three eggs to the fowl. The best pen averaged for the month, 24.9 per cent, doing just about half as well as the best pen of Rhode Island Reds. But again we want to emphasize the fact that we are not comparing breeds, and perhaps if the full truth were known, we would find that the time of hatching these fowls, and the care and feed given are the deciding factors in these records. The second best record was made by a flock of 206, which averaged 21 per cent production, while the poorest record was made by a flock of 111 fowls, which averaged but 1.2 per cent.

Reports for White Rocks for the month show that 964 fowls laid 2,180 eggs, an average of about 2¼ eggs for each fowl. The best pen made an average of 12.7 per cent production and the poorest pen 3.5 per cent.

The records show that 1,303 White Wyandottes laid 2,513 eggs, an average of a trifle less than two eggs a hen, the best pen making an average of 11.6 per cent, the poorest but .7 per cent.

Now we come to the big-little White Leghorns, of which there were 6,344 in the report, laying 34,996 eggs, being an average of about 5.5 eggs to the hen, only .5 more than the Reds. The best pen averaged 53.5 per cent production and the poorest pen averaged 2.4 per cent.

The fowls of mixed breeding did not do so bad, surpassing in egg yield in the month of December the Rose Comb Rhode Island Reds, White Rocks, Buff Rocks, Buff Wyandottes, White Leghorns, and Buff and White Orpingtons. This is not to boost mixed fowls or cross breeds, but simply giving these figures as brought out by these reports. The best flock of mixed fowls averaged 6.2 per cent production. Many interesting facts are brought out by these figures, but there are probably more facts obscured through lack of information.

The only lesson I wish to bring to our readers from these records is the fact that it is possible for a farm flock, kept under farm conditions, to produce a very profitable egg crop during the month of December. This may be done with any one of a number of varieties.

IN THE NEXT ISSUE

The Outlook for Dairy Business

By GILBERT GUSLER.

WITH cheap land and cheap feed here in the Mountain States, farmers can produce butterfat and make a fair profit when farmers in Eastern dairy sections with their high-priced land, and consequently high cost of feed and operation, would be losing money. The secret of success in any line of business is to get the cost of production down below that of your competitor. You will enjoy and profit by reading Mr. Gusler's article. He thinks the dairy business has a great future and humorously remarks: "A young man about to make his start in life asked an older man for counsel as to some business that he might enter in which there was a good prospect of reasonable income and permanence. The older man said: 'Go into the shoe business. As long as the babies are born barefooted, there will be a good demand for shoes.'" The same logic applies to the business of dairying. The habit of eating has become well fixed. The dairy cow is queen of the world's animal food producers.

The above is only one of many good articles, stories and special features that will be found in the March 1 issue.

Special Features in This Number

Sure and Steady Income From Diversified Farming.
Prize Letters From Farm Poultry Raisers.
What Is the Future Prospect for Land Values?
Market Outlook for Farm and Ranch Products.
What Do You Know About the Art of Plowing?
From the Nation's Capital.
Two- and Three-Plow Tractors.

If we are overlooking any subject that you are particularly interested in, write and let us know about it. Our Editors are always anxious to furnish readers with what they desire in the way of information. If you find this issue interesting and valuable pass it along to one of your neighbors if they are not taking Western Farm Life.

Come In and Get a Copy of this Big FREE Poultry Book

We want every poultry raiser in this vicinity to have a copy of DARLING'S new poultry book. Written by a former Government expert, it tells all about the feeding methods of famous poultry men and how they use

DARLING'S MEAT CRISPS

to increase their poultry profits. It tells how to make your hens lay all winter long. How to start the pullets laying early. How to produce fertile eggs for hatching. How to make your chicks grow bigger and faster. Come in and get your copy of this valuable book today — it's free.

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O. J. Snyder

1535 Larimer St., Denver, Colo.

From the Nation's Capital.

(Continued from Page 9.)

Federal aid for the building of interstate and farm-to-market highways under the Department of Agriculture was commended, and Congress was urged to enact legislation which will legalize farmers' co-operative marketing associations.

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Action of the Rump Conference.—The President's conference was not altogether harmonious. A group of delegates came with the evident determination to put through a resolution in favor of government price fixing on staple farm products, and showed their disappointment when defeated in their efforts by vigorously assailing the managers of the conference. President Samuel Gompers of the American Federation of Labor undertook to prevent the adoption of a resolution recommending that both capital and labor share with the farmer in price deflation, and was vigorously criticised. Following the conference, several farm organization leaders, claiming to represent 600,000 farmers, not satisfied with the proceedings, met and were addressed by Senator Ladd of North Dakota. Herbert F. Baker, president of the National Farmers' Council, presided. This rump conference adopted resolutions asking for immediate stabilization of corn, wheat, cotton and wool prices, and the establishment of a government agency to control elevators, flour mills and bakers to prevent profiteering. A government agency similar to the United States Grain Corporation, to finance the purchase here and sale abroad of farm products was proposed. An immediate reduction in freight rates to the level prevailing before the passage of the Esch law, and government ownership of railroads were favored. The agricultural bloc in Congress was endorsed, Muscle Shoals proposition favored, and interference with the Department of Agriculture opposed.

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Two Price-Fixing Bills Are Being Considered.—Congress is moving to get through some sort of legislation designed to relieve the agricultural situation. Two price fixing bills are now being considered in hearings before the committee on agriculture of both the House and Senate. One bill introduced by Representative Christopherson of South Dakota, would create a stabilization commission and provides for stabilizing the prices of certain farm products. The commission is empowered to purchase all marketable grades of wheat, rye, flax, oats, barley, buckwheat, corn, rice, grass seed, sugar and wool produced in the United States, upon delivery at terminal markets. The commission is required to publicly announce the prices which it will pay for the various surplus products before planting time. The prices to be paid shall be as nearly as practicable the average estimated cost of production plus a reasonable profit. The commission is authorized to borrow from the Federal Reserve banks the sum of $500,000,000 to comply with the provisions of the act at an interest rate not exceeding 3 per cent per annum. This bill contemplates a permanent government price-fixing policy.

A price stabilization bill introduced by Representative Sinclair of North Dakota provides that the secretary of agriculture, the secretary of labor and chairman of the Interstate Commerce Commission, shall jointly establish and promulgate minimum prices of controlled agricultural products of the crops of 1923, 1924, 1925 and 1926. Such prices shall be based upon the estimated cost of production. For the crops of such products for the year 1922 the following minimum prices are established by the bill:

Wheat—No. 1 Northern spring at Chicago, $1.50 per bushel. Corn—No. 2 yellow at Chicago, 85c per bushel. Cotton at New Orleans, 18c per pound. Wool, unwashed at Boston and St. Louis, 55c per pound. The Grain Corporation is revived to purchase the farm products mentioned above at the established prices. A billion dollars is appropriated to be expended by the Grain Corporation.

It is proposed that the Grain Corporation sell the products purchased in the world markets, and that the government make up the losses, if any, between the purchase price and the sale price out of the public treasury.

In the hearings on these bills, E. B. Page, a North Dakota farmer, said that if nothing was done in government price fixing, the Dakota farmers would be asked to reduce the wheat acreage 15 per cent and many of them would quit farming. He thought that $1.25 a bushel for wheat to the grower would be a fair guarantee. Representative Burtness of North Dakota testified that the Non-Partisan League was asking for $2.20 a bushel, and the United Grain Growers $2 a bushel for wheat.

::::

President Howard on Price-Fixing Legislation.—Commenting on the proposed attempts to boost the prices of farm products by legislation, President Howard of the American Farm Bureau Federation, says: "There is a very imminent demand from many sources that an effort be made to cure our woes economic as well as social through government measures, and many are advocating establishing state or national control of the regulation of human relationships. They would solve the problems of distress by government ownership. They are even advancing artificial schemes of price fixing.

"It is my conviction," continues Mr. Howard, "that co-operation offers not only the remedy for the inequality in returns to the producers, but the escape from the threat of that which I would call socialism. Even some farmers who would quickest resent the idea of the government operating their farms are clamoring for government action in other lines, not realizing that government ownership of our farms is part of the whole plan."

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Proposes to Extend Life of War Finance Corporation.—Senator Kellogg of Minnesota has introduced an amendment extending the life of the War Finance Corporation to July 1, 1923.

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Leader of Agricultural Bloc to Resign.—Senator Kenyon of Iowa has accepted the position of judge of the Federal court. His removal from the senate will be a distinct loss to the agricultural interests. He has from its inception been a leading member of the senate agricultural bloc, and played an active part in enactment of packer control, anti-grain gambling, and much other legislation demanded by the farmers.

Market Outlook for Farm and Ranch Products.

(Continued from Page 6).

ard, $16@19; No. 2, $12.50@15.50; No. 1 timothy, $13.50@14.50; No. 2, $10@11.50; No. 1 light clover-mixed, $13@14; No. 1 clover-mixed, $10.50@12.50. Straw, $6@7.

Egg Market Erratic.

The egg market has been fluctuating rather violently, although over a smaller range than during the early part of January. Weather conditions are still the dominating influence. The supply of eggs during January at the four leading cities was 20 per cent larger than a year ago. Nevertheless, cold-storage holdings at these four markets decreased much more rapidly than in January, 1921. Extremely heavy consumptive demand is the explanation. Receipts of dressed poultry have fallen off in the last month and the addition to cold-storage holdings in January was slightly smaller than in January, 1921. Nevertheless, total stocks at the four leading cities are more than 72,000,000 dozen.

Kansas City—Eggs, firsts, 34c; seconds, 24c. Live poultry—Springs, 21c; heavy hens, 21c; light hens, 16c; roosters, 10c; turkeys, 38c; ducks, 19c; geese, 16c.

Denver—Eggs, 42c. Live poultry—Hens, 25c; springs, 26c; roosters, 15c; geese, 30c; ducks, 30c; turkeys, 45@48c.

Lull in Butter Market.

After several weeks of rapid fluctuations, the butter market settled down to a relatively steady basis during the past week. Supplies at some of the leading markets were only sufficient to meet the regular consumptive demand which has increased as a result of lower prices. Eastern markets, especially New York and Philadelphia, failed to make as strong a showing as Chicago, due in part to heavy arrivals of New Zealand and Australian butter and Danish butter at New York, and to lower quotations on the Danish market. Reports from producing sections indicate a decrease in the make and good-sized reductions were made in cold-storage stocks. Even in the east no heavy accumulation of street stocks was reported. Receipts of butter at Chicago, New York, Boston and Philadelphia during January were nearly 30 per cent larger than in the same month last year. As a result, the reduction in cold-storage stocks at these four points during the month was slightly less than in January, 1921.

Prices for 92-score fresh butter on February 3 were:

Chicago, 37c; New York, 37c; Boston, 37½c; Philadelphia, 36c.

Potato Markets Unsettled.

Potato markets have been unsettled recently, with the demand at country shipping points and the movement relatively slow. Colorado and Idaho continue prominent as shippers with Maine in the lead at the present time and Minnesota a big factor. Northern sacked round whites, f. o. b. shipping points are quoted at $1.55 to $1.75 a 100 lbs. The Chicago carlot market is quoted at $1.70 to $1.95 for round whites, with most city wholesale markets at $2.25 to $2.45.

Horse Awards at Stock Show.

Following are the awards made in draft horses and mules at the National Western Stock Show, Denver, January 14 to 21, 1922:

HORSES.

PERCHERONS.

Judges—Geo. A. Heyl, Washington, Ill.; Herbert Howarth, Broomfield, Colo.; Dan D. Casement, Manhattan, Kan.

Exhibitors—A. J. Campion, Denver; E. P. Cromer & Son, Gering, Neb.; David Eisele, Longmont; Arthur Guth, Broomfield; Wm. Hanson, Longmont; State Industrial School, Golden.

Aged Stallions—(4 shown)—1, Cromer & Son on Colonel; 2, Eisele on Juranus II; 3, Humphreys on Post Entry.

Three-year-old Stallions—(2 shown)—1, Eisele on Freeman E; 2, Guth on Marquette.

Two-year-old Stallions—No entries.

Yearling Stallions—(5 shown)—1, Hanson on Prosper; 2, Eisele on Comet; 3, Cromer & Son on Red Cloud.

Aged Mares—(6 shown)—1, Hanson on Mary Progressive—2, Cromer & Son on Zembea III; 3, Guth on Daisy.

Three-year-old Mares—(3 shown)—1, Guth on Beauty; 2, Cromer on Minnie; 3, Guth on Catherine.

Two-year-old Filleys—(2 shown)—1, Cromer & Son on Maxine III; 2, Cromer & Son on North Platte Belle.

Yearling Filleys—(1 shown)—1, Hanson on Loretta.

Colts—(4 shown)—1, Cromer & Son on Pilot; 2, Guth on Marguerite; 3, Guth on Kozan.

Get of Sire—(1 shown)—1, Arthur G. Guth.

Produce of Dam—(6 shown)—1 and 3, Arthur G. Guth; 2, E. P. Cromer & Son.

Champion Stallion—Eisele on Freeman E.

Reserve Champion Stallion—Cromer & Son on Colonel.

Champion Mare—Guth on Beauty.

Reserve Champion Mare—Hanson on Loretta.

BELGIANS.

Judges—Geo. A. Heyl, Washington, Ill.; Herbert Howarth, Broomfield, Colo.; Dan D. Casement, Manhattan, Kan.

Exhibitors—A. J. Campion, Denver; Glendale Stock Farm, Aspen; W. F. Hayden, Denver; Albert Layne, Fort Lupton.

Aged Stallions—(2 shown)—1, Campion on Ermite; 2, Hayden on Jasper Cousine.

Three-year-old Stallions—No entries.

Two-year-old Stallions—(1 shown)—1, Glendale Stock Farm on Glendale Chief.

Yearling Stallions—No entries.

Aged Mares—(3 shown)—1, 2 and 3, W. F. Hayden on Post Entries.

Three-year-old Mares—(1 shown)—1, Glendale Stock Farms on Glendale Polly.

Two-year-old Filleys—(2 shown)—1, Layne on Irvindale Lulu; 2, Glendale Stock Farm on Glendale Mariette.

Yearling Filleys—(1 shown)—1, Layne on Glendale Josie.

Colts, Either Sex—No entries.

Get of Sire—No entries.

Produce of Dam—(1 shown)—1, Albert Layne.

Champion Stallion—Glendale Farm on Glendale Chief.

Champion Mare—Albert Layne on Irvindale Lulu.

Reserve Champion Mare—Glendale Stock Farm on Glendale Polly.

STANDARD BRED.

Exhibitors—John E. Burns, Longmont; W. W. Cowdrey, Denver; Geo. Peak & Son, Winchester, Ill.; Wm. O. Reynolds, Denver.

Standard Bred Stallion—(4 shown)—1, Peak & Son on St. Mesrob; 2, Burns on Sherman Bell; 3, Cowdrey on Mr. Forbes.

THOROUGHBRED.

Exhibitor—Maj. C. F. Cusack, Denver.

Thoroughbred Stallion—(4 shown)—1, Cusack on Ashton; 2, Cusack on Sands-of-Time; 3, Cusack on King Plaudit.

GRADE DRAFT.

Judges—Geo. A. Heyl, Washington, Ill.; Herbert Howarth, Broomfield, Colo.; Dan D. Casement, Manhattan, Kan.

Exhibitors—Harry J. Burns, Longmont; John E. Burns, Longmont; E. P. Cromer & Son, Gering, Neb.; Denver Union Stock Yard Co., Denver; Arthur G. Guth, Broomfield; C. E. Tupps, Brighton.

Aged Draft Mare or Gelding—(10 shown)—1 and 3, Denver Union Stock Yard Co.; 2, E. P. Cromer & Son.

Two-year-old Draft Mare—None shown.

Brood Draft Mare with Colt—(2 shown)—1, Arthur G. Guth; 2, E. P. Cromer & Son.

Pair in Harness—(4 shown)—1, C. E. Tupps; 2 and 3, Denver Union Stock Yard Co.

MULES.

Aged Mules—No entries

Two-year-olds—(4 shown)—1, J. A. Osner; 2 and 3, J. H. Farmer.

Pair, 2,400 Pounds or Over—No entries.

Pair Under 2,400 Pounds—(1 shown)—1, J. H. Farmer.

JACKS AND JENNETS.

Judges—Geo. A. Heyl, Washington, Ill.; Herbert Howarth, Broomfield, Colo.; Dan D. Casement, Manhattan, Kan.

Exhibitors—M. T. Bernard, Broken Bow, Neb.; Harry J. Burns, Longmont; John E. Burns, Longmont; J. H. Farmer, Eastlake.

Aged Jacks—None shown.

Two-year-old Jacks—(5 shown)—1 and 2, M. T. Bernard; 3, Harry J. Burns.

Yearling Jacks—(2 shown)—1, John E. Burns; 2, M. T. Bernard.

Aged Jennets—(2 shown)—1, Harry J. Burns; 2, John E. Burns.

Two-year-old Jennets—(1 shown)—1, John E. Burns.

Yearling Jennets—(1 shown)—1, John E. Burns.

Jack Colts—(2 shown)—M. T. Bernard; 2, John E. Burns.

Dairying and Hog Raising

All letters regarding commercial and technical features of dairy farming and hog production promptly answered. Address all communications to Dairy Department, Western Farm Life, Denver, Colorado.

Saving the Seventh Pig.

The average number of pigs saved to the litter is largely a matter of the skill and watchfulness of the caretaker. It is most unprofitable to feed a sow six months or so and then have her save only two or three pigs. Some experienced hog men think that with mature brood sows anything less than eight pigs saved represents a loss, or at least means too great a cost per pig.

The successful hog man must first of all consider constantly the comfort of his animals. If he delights in kicking and cuffing his brood sows around he can expect them to regard him as an enemy when he attempts to render assistance at farrowing time. The brood sows must be gentle if best results are to be obtained.

Hog raisers quite generally condemn corn as a feed for brood sows, but it is abuse rather than use that causes the trouble. Corn alone, however, is a poor brood sow ration. A mature brood sow should gain during the gestation period as much as she lost while suckling her previous litter, but this gain cannot be safely made with corn alone or with any other one grain. Sows so fed are likely to produce weak puny pigs and frequently are feverish and irritable at farrowing time. Corn lacks the bone and muscle forming material so essential to developing the young pig properly. Give the brood sows alfalfa hay, all they will eat, and they will produce pigs with the appetites of wolves and strong and hearty from the moment they are farrowed.

Brood sows must not be allowed to become lazy and sluggish. Exercise during gestation is as important as proper feed. Encourage exercise by scattering barley or other small grain on the ground or a feeding floor. Some hog men feed the sows at some distance from their sleeping quarters to encourage exercise. Whatever the method, they must be kept up on their feet several hours daily for some weeks previous to farrowing.

Grain feeding must be limited, but feed enough to keep the brood sow gaining at the rate of ½ to ¾ pounds daily. By limiting the grain and keeping alfalfa or other legume roughage before them they will properly balance their ration and come to farrowing time in proper condition to bring forth large litters of strong vigorous pigs.

It of course follows that a sow must have a dry, warm place in which to farrow, but she must not be placed in cramped quarters too long in advance of farrowing.

Skim Milk for Hogs.

Everything considered, there is probably no supplemental feed given to hogs of greater value than skim milk. It is one of the best of feeds to give the brood sows suckling pigs and nothing is better for young growing pigs. The dairyman who does not raise a few hogs and give them some of the skim milk is missing part of the profits of milking cows.

It has been demonstrated that when fed with whole kafir to pigs they made 42 per cent greater gains and with 28 per cent less grain for each pound of gain than pigs fed kafir alone. When compared with kafir fed to pigs having the run of alfalfa pasture, the pasture-fed pigs made 24 per cent less gains and required 11 per cent more grain to each pound of gain than the ones fed skim milk with their kafir. In feeding skim milk to pigs in connection with pasture and kafir the gains were 30 per cent greater and the grain requirements 5 per cent less than with the pigs fed skim milk and kafir without pasture. These tests were made with pigs of about 125 pounds weight.

Corn is generally considered to be 10 per cent more valuable for hogs than kafir. An interesting summary of feeding tests involving 106 pigs made at seven different experiment stations comparing corn and skim milk and corn alone has been made by Professor Smith of Indiana. These pigs weighed about 100 pounds when the tests began. Half of them were fed corn alone and the remainder corn and skim milk. The pigs fed corn supplemented with skim milk gained practically 60 per cent more rapidly than the ones getting corn only, saving 36 days in the time required to put on an additional 100 pounds weight. Their average weight at the close of the tests was 229 pounds, while the corn-alone pigs weighed but 184 pounds. At the rate the latter pigs were gaining it would have taken 43 more days to have reached the weight of the milk-fed hogs. The results showed that 800 pounds of milk had replaced 193 pounds of corn, or a trifle more than 4 pounds of milk to equal 1 pound of corn.

The greatest efficiency from feeding corn and skim milk together comes from feeding at the rate of about 3 pounds of milk to a pound of corn. The relative values of the corn and milk would determine the most profitable ratios in which to combine them.

In feeding skim milk to hogs, do not feed sweet one day and sour the next, or digestive troubles will develop and the gains will be decreased. As in calf feeding, it is important to keep the pails and feeding troughs as clean as possible. It is disastrous to feed hogs skim milk from tubercular cattle unless it is pasteurized. There is perhaps no quicker way to detect the presence of tuberculosis among the dairy herds of a community than to watch the post-mortem conditions in the hogs fed in connection with the cattle.

Keep Hogs Free From Worms.

Worms take a heavy toll from the hog profits. Keeping pigs free from worms is largely a matter of prevention and involves cleanliness about the yards and quarters. Filth invariably accompanies wormy hogs. The pigs become infected by swallowing the eggs of worms discharged by the older hogs and these eggs should be destroyed by frequent cleaning of the yards and quarters and the free use of strong disinfectants. This is a much more effective and satisfactory method of keeping hogs free from worms than to rely on the administration of internal remedies.

It is particularly important that the farrowing quarters be thoroughly cleansed before the young pigs come. Use hot water and lye to wash floors and walls. As soon as possible after farrowing get the sow and pigs out on clean ground where hogs have not run recently if possible. Young pigs should be kept from contact with older hogs and wormy hog yards for several months in order to give them a good start. If the worms can be kept under control the pigs will grow to greater size and make larger returns for their feed, fewer pigs will be lost from thumps, and in general pigs not weakened by infestation with worms will be less susceptible to diseases of all kinds.

Sell Alfalfa to Cows.

Colorado alfalfa which is selling as low as $3 a ton in the stack, can be sold through average milk cows at $15.80 a ton, says E. J. Maynard of the Colorado Agricultural college. He proves his assertion by the following calculations:

An average dairy cow producing 20 pounds of milk a day, testing 4 per cent butterfat, will yield in one month 24 pounds, which at 32 cents a pound will return $7.68. Feeding a daily ration of 25 pounds of alfalfa and a pound of grain for every four pounds of milk the cow gives, using a grain mixture of 1 pound of cottonseed meal to 6¼ pounds of corn, the cow will require each month 129.3 pounds of corn, 20.7 pounds of cottonseed meal and 750 pounds of alfalfa. Charging the corn at $1 a hundred, cottonseed meal at $45 a ton, the cost of her grain for each month would

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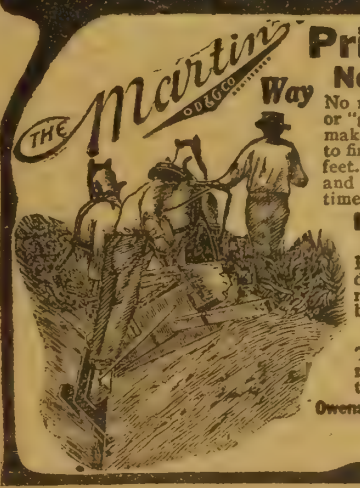

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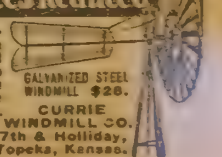

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We wish to get letters from farmer hog raisers telling their actual experiences in

Getting a Profitable Start in Hogs

We feel that many farmers in Colorado are not raising hogs, or as many as it would be profitable for them to raise. Many may not know the best manner in which to get started and how to handle hogs for a maximum profit.

We will pay $5.00 to the farmer hog raiser writing us the best letter in which he explains how he makes money out of his hogs. For the second best letter $2.00, and the third best letter $1.00. Honorable mention will be made of all other letters suitable for publication.

We want "grass roots" information and experience on pork production. We want this information so that our readers will be able to profit by your successes. You must give your own actual experience. We cannot consider letters telling how someone else did it.

Do not fear that lack of writing ability will handicap you in the competition for the prizes. The letters will be judged entirely upon the value of the facts presented.

Whether you grow few or many hogs, write and tell us about it. If you have a small herd and have handled it successfully, the method is just as valuable as if you had a large one. All we want is a plain ordinary letter giving the facts. Our editor will prepare the letters for publication so they will appear in thoroughly creditable farm.

The following are suggestions as to some of the information you can supply: When you began raising hogs. Did you start with bred sows, weanling pigs, or stock hogs? How have you developed your herd? How do you feed, house and care for them? Give experience with fall and spring pigs; your feeding costs; your net profits; how do you market; when and at what weight and age. What do you plan for this year?

Your letter must reach us by March 1. The time is short, so get busy right away. Address

EDITOR, WESTERN FARM LIFE,
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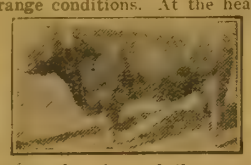

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Shorthorns Top Denver

Otto Larson, Silt, Colo., sold thirty Shorthorn steers at the top of the season's market at Denver in October. The Record-Stockman quotes them as of "exceptional quality, weighing 748 pounds." It pays to grow Shorthorn beef.

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SHORTHORN BULL FOR SALE.
ADVOCATES URR, roan, calved Sept., 1919. Bred by H. F. Harmon. Sire, Imp. Advocates Model 647079. Dam, Maid Marian 138615; sire, Gladstone 239313. Dam, Merry Maid 2d 29528; dam, Nonpareil Victor 2d 258255. Dam, Merry Maid 72d; sire, March Knight 188105. Dam, Imp. Wimsome Maid; sire, Marchison 192330.
H. F. HARMON, BOULDER, COLO.

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Herd headed by Marwalton Rustler, a grandson of Avondale.

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Cows from Polled Plato, herd headed by POLLED SUCCESS A 3rd. Young bulls and heifers for sale.

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HEREFORDS.

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HEREFORDS

Some choice heifer calves and a few bulls of Beau Santos and Bright Stanway breeding are for sale.

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be $1.76. With this cost of grain the return from the cream check for the month would leave $5.92 for the 750 pounds of alfalfa. In other words, the alfalfa grown on the farm would bring $15.80 a ton.

There are by-products also to be considered. Skimming a 33 per cent cream the cow would produce each month 528 pounds of skim milk, and the manure properly mixed with straw would weigh from 800 to 1,000 pounds. Skim milk is a most valuable feed for hogs and poultry. At the present prices of feeds it is easily worth 20 cents a hundred pounds.

Butterfat is not worth as much now as when Mr. Maynard was doing his figuring, but even with the seasonal variation in the price of butterfat the dairy cow will supply a safe, sound and profitable cash market for farm feeds year in and year out.

Two Million Unhatched Chicks Die Each Year.

(Continued from Page 7.)

cool them. An egg should not be moved when overheated. Normal temperature means normal chicks; too low temperature, a poor hatch; too high, the chicks will be irregularly developed.

"I select clean, fresh eggs of regular shape, good shell and medium size for incubation, keeping them in an even temperature until I can put them in the incubator; the sooner the better. With the temperature at 102 degrees, I begin to turn the eggs the third day, airing them twice daily, only enough to turn them. I roll them gently with my hands, changing their position on the tray, instead of turning them just half over; then I change the tray, end for end, in the machine. The second week I raise the temperature to 103 degrees, airing and turning them the same, and the last week I increase to 104 degrees, turning and airing them twice daily, till the eighteenth day, leaving them 15 to 20 minutes always in a room of even temperature.

"The eggs should be tested on the eighth, twelfth and eighteenth days and all infertile eggs taken out. I keep the machine closed after the last turning, till the chicks begin to pip. Then I place a cloth wrung out of very warm water over the eggs for a short time. No harm will come even if the temperature should rise to 105 degrees, but do not let it get below 103.

"Regardless of usual directions, don't let the little chicks stay in the incubator till they are all smothered, waiting for the worthless lot of eggs left to finish hatching. I never open the door oftener than is strictly necessary, nor leave it open longer than is required to remove the strongest, lively chicks, which I take out and place in baskets filled with warmed straw and cover with warm blankets or cloths. If there is no decided chill in the air, they will not be injured in the least.

"My machine capacity is 200 eggs. I keep from six to eight old hens sitting on a few eggs apiece, just enough to make them broody, and after all the chicks are out and are thoroughly dried, I divide them into lots of about 20 to 25, according to the size of the hens and give each hen her number, keeping them in dry, warm quarters. The old hens do the rest aside from feeding. I find this a much better plan than using the brooders requiring such constant care. I feed the first few days dry feed such as bread crumbs and oatmeal, some real fine sand and fresh water two or three times daily. I also use sour milk, but I never allow water to stay in their coops where they will naturally and very quickly become all wet and chilled, resulting in death. The loss of just a few is a costly one when we count the price of eggs, the care of growing the flock and the time and work spent in hatching.

"Later, when they begin to grow strong and lively, I mix their feed, cracked corn, wheat and the scraps from the kitchen table, together with the sour milk in generous quantities. Sour milk has a food value not found in anything else and it is the cheapest food which farm women have. It acts as a regulator, keeping them in perfect health. One should never expect to get 200 chicks from 200 eggs. If you get 75 per cent you are fortunate. I usually get 150 to 165 from 200 eggs.

"Following this method carefully and closely, I rarely lose a chick. Sometimes in very cold weather I keep a comfort on top of the incubator, so as to keep the heat more even. A person cannot turn the lamp down in the incubator and go visiting and expect 100 per cent results. In very cold weather I put a cloth in the tray to fill up spaces where infertile eggs are taken out. I supply moisture by placing a shallow pan of water underneath the tray.

"The rewards of this game, which requires some capital, patience, energy and quite a bit of stick-to-it-iveness, are fine, healthy birds, aside from good financial returns. Many women, living on farms, feel they are far away from opportunities to earn money. Too often they overlook the fact that big returns are possible from raising chicks."

What Do You Know About the Art of Plowing.

(Continued from Page 7.)

places where the soil blows, listing is better in the fall than plowing; but the intervening spaces should be plowed out in the spring before planting, although for grain some claim that this is not necessary.

Late spring and summer plowing is often used for winter wheat and the farmer can often accomplish work of this sort after the other crops are in; but earlier plowing when it can be done is the best, for in all the tests April plowing yielded more heavily than either May or June.

The keynote of success in dry farming is depth. Deep plowing, deep moisture, and deep rooting. Even if the spring of the year is dry the right kind of a farmer can still raise crops if he has previously conserved sufficient water in the subsoil. The top six inches may dry out, but that does not bother him. He takes a lister or plow, gets down to the moisture and plants his crops in it. When they are up sufficiently high the cultivator fills up the furrows and the crop is then mulched 6 inches deep. If there has been eight or nine inches of water conserved in the subsoil the crop will make without any rain. Crops are made every year in this way in California and the writer also has raised corn which has never been irrigated or rained on. Years ago the Egyptians owed their subsistence to crops raised on water conserved in the soil from the Nile overflow. Dr. Alway of the University of Nebraska planted wheat in cylinders 6 feet deep filled with good soil and treated to about 8 inches of water. The cylinders were placed under a rain-proof shed. The wheat grew 4 and 5 feet high and matured grain. The roots went to the bottom of the cylinders.

How deep should a man plow? The bigger the seed bed the bigger the crop; but after a certain depth is reached the working expenses commence to encroach on the profits. The increase of crop up to 10 inches is highly profitable in nearly every variety of soil, and in soils with a tight bottom subsoiling to a depth of 15 to 20 inches has been known to increase the yield by one-third.

It is hard work to plow deep and few farmers like doing it, but it should be noted that it is much more economical to raise twenty bushels of grain on one acre than on two. Crops like beans and potatoes, which have no tap root to force its way into the subsoil for moisture, cannot be raised economically except on a deep seed bed, and this is why we read of only 600 pounds of beans to the acre and thirty to forty bushels of potatoes, whereas forty bushels of the former and 250 bushels of the latter have been raised by dry farmers on deep seed beds.

It is a curious fact that the irrigators as a rule plow deeper than the dry farmers. It was discovered at Greeley that a 6-inch seed bed usually produces a 6-inch beet, and that if you wish to grow a 12-inch beet the plowing must correspond. After growing their big sugar beets they now find that they can raise a big crop of wheat on their deeply plowed land with very little irrigation. A farmer writing from that neighborhood says that deeply plowed land with one irrigation will raise more produce than shallow plowed land with three.

Can all soils be plowed deeply to advantage? In selecting a dry farm a deep soil is of paramount importance, and if the farmer has the soil it is safe to plow any depth; but there is no sense in plowing up gopher clay. These different colored clays of the cretaceous period are mostly barren of humus and often alkaline, and no farmer wants clods of sticky tough clay in his seed bed. If the subsoil, however, is friable when worked, a good deep fairly well fertilized seed bed can be secured in time by plowing under green stuff.

Does it injure the soil to plow it dry? In many states the ground is often plowed dry whenever convenient. Some soils plow dry much better than others and produce fine crops. The point is that dry plowed land is over-aerated and until this condition is remedied it is not safe to plant a crop on it. The weather always does this in time and a clod crusher and harrow may complete the job. Land plowed dry in the fall is usually all right to plant by spring unless the precipitation has been abnormally light.

Deep plowing is not so much a matter of equipment as it is of determination on the part of the farmer. Any man can get most ordinary plows down 10 inches and three good horses over 1,000 pounds apiece can usually pull it, but if he uses a riding plow four horses are the least he can do with.

The implement houses all try to make themselves popular in catering to the farmer and if you talk to one of these men, he will tell you that his principal idea is to cover a large acreage in a day almost regardless of depth. The tractor men are also following suit and it is almost impossible to find a machine that can haul enough bottoms to cover its own wake and plow deep enough to raise a good crop.

Brown & Tabor Sale.

John L. Brown and Harold A. Tabor held their first combination purebred Duroc Jersey bred sow sale at Wray, Colo., February 1. They sold thirty-one head of gilts and tried sows, averaging $45.65 per head. The top sow sold for $105.00. Cols. Charles Burnham and E. B. Sherlock were the auctioneers.

The following are the purchasers of the sows that brought $50 or more per head: W. H. Toner, $50; Fred Kerns, $55; Fred Kerns, $55; J. G. Jones, $105; F. A. Haskell, $62; Ray Sechrist, $50.

While no sensational prices were reached, this sale makes a very favorable comparison with other public sales of purebred sows held in other sections.

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Meat Type Hampshires

The International Livestock Show is the test of hog producing power. Hampshires have won the grand championship in this test four years in succession—1918, 1919, 1920, 1921—in the hands of average farmers. No experts needed to make Hampshires win.

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Amer. Hampshire Swine Record Ass'n, E. C. Stone, Secy., Dep. 7, Peoria, Ill.

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HAMPSHIRE HOGS

EARLY MATURING MARKET TOPPERS

Pay Dividends on the Investment.- Only a small percentage of our fall litters were saved for breeding purposes, but they are extra good ones—well grown out. Inquiry for Hampshires is good and sales are increasing every week. Our hogs have been shipped into four different Rocky Mountain states this winter. Have only a few gilts left that are bred for spring farrow, and one or two choice young boars. Write us your wants today. Prompt delivery and satisfaction guaranteed.

N. E. MOSHER & SON, HUGO, COLO.

PUREBRED HAMPSHIRES

My Hampshire herd is the same blood lines that made such remarkable records at the Des Moines, Ia., and Lincoln, Neb., state fairs in 1919. I am now offering sows and gilts bred for March and April farrow. Also some choice September pigs. Write me.

P. P. CEDER, GENOA, NEB.

Hampshires

We have a choice lot of gilts bred for April and May farrow, priced at $40 each. We also have a fine herd of young tried sows weighing from 300 to 500 lbs., bred for March and April farrow, which we are going to sell below their actual value. They are bred to grand champion boars and we are pricing them from $45 to $60. Everything immuned. Satisfaction guaranteed. Scudder Bros., Doniphan, Nebr.

DeKalb's King 160th

BRED SOW SALE

At our farm, ARAPAHOE, NEB., FEBRUARY 20, 1922. Write for catalogue and other information.

C. S. BRATT & SON, Arapahoe, Neb.

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Colorado Agricultural College, Ft. Collins, Colo.

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Blue Ribbon Durocs High Winners *At Denver*

Buy the best. We won more First and Purples in the breeding classes at Denver, 1922, than all other Colorado herds combined. Our prices are reasonable. A few boars left. Fall pigs at a bargain. Bred gilts—one or a carload.

Blue Ribbon Live Stock Co.
C. F. Burke, Mgr. PUEBLO, COLO.

SPRING BOARS

Just a few real herd headers left ready to go at pre-war prices. Used with grade sows even, they will more than pay for themselves on the first crop of pigs. Write today.

C. C. Boyd, Yuma, Colo.
Livestock Auctioneer and Duroc Breeder.

DUROCS

Gilts bred to my champion boars and June pigs from my great yearling "Golden Chief" and a daughter of the World's Grand Champion, Great Orion Sensation, can be seen at the Stock Show.

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Mather's Big-Type Polands

sold to breeders in four states this year are giving satisfaction.

BUY WEANLING PIGS
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SIRED BY F. B's LONG BOB.

White Leghorn Eggs, $2 per setting, $7 per 100; and Mammoth Bronze Turkeys.

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MILKING SHORTHORNS.

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FOR SALE, PRICE $250

RED. CALVED JUNE 8, 1920.
DAM: POLLY.
SIRE: DUKE GLENROSE.

This is the last son of Duke Glenrose that we will have to offer. Duke Glenrose has three daughters in Record of Merit with 1st calved; six dams averaging 11,517 lbs. R. of M.

More proved milk production behind him than any other bull in service in the U. S. First check or acceptance by wire takes this, his last and perhaps best son, from the kind of cow you would like to have.

Polly. Official record 8,249.7 lbs. at 10 yrs. Never before hand milked.

Bonvue Farms Co.
Stockyards, Denver, Colo.

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TAKEN BY THE

WYLDEMERE FARM Milking Shorthorn Herd

AT THE WESTERN STOCK SHOW, DENVER, 1922.

2nd Prize Royal Glenside.....Aged Bull.

1st Prize Calf Herd.....
1st Prize Get of Sire.....
1st Prize Young Herd.....
1st Prize Produce of Dam...
} The Get of Royal Glenside

1st Prize Yearling Bull.....
1st Junior Champion .....
1st Reserve Grand Champion..
1st Prize Junior Bull Calf .
1st Prize Senior Bull Calf...
} The Get of Royal Glenside

1st Prize Senior Heifer Calf.
1st Junior Champion Female.
1st Grand Champion Female.
2nd Prize Two-Year-Old Heifer.
4th Prize Two-Year-Old Heifer.
4th Prize Senior Yearling Heifer.
2nd Prize Junior Yearling Heifer.
3rd Prize Junior Yearling Heifer.
4th Prize Junior Heifer Calf.

J. B. BENEDICT

Owner and Breeder.

JOE GOETZFRIED, Herdsman.

NOTHING FOR SALE AT PRESENT.

Milking Shorthorns

10 registered cows that will freshen this spring. All good cows and have been hand-milked. Priced from $100 to $125.

10 head yearling heifers, hand-raised on the bucket. Priced from $50 to $75.

8 young bulls, ready for service this spring. Priced at $75.

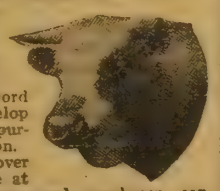
Several young bulls and heifer calves. Priced from $35 to $50.

My cows are all range raised and rustled their living until freshened the first time, so are not as large as they should be, but several have milked over 1,000 lbs. a month without special care. The young heifers have all been hand-raised and should make a nice bunch of cows.—Remember, all this stuff offered for sale is registered and should move quickly at the prices quoted. Write me your wants.

OTTO RAMSTETTER, GOLDEN, COLO.

Shorthorns That Milk

ARE MONEY MAKERS.



A herd that will give you a good monthly cash income is what you will need in the future. One of our young bulls from a Record of Merit cow can develop your herd into a dual-purpose paying proposition.

We know the war is over and have bulls for sale at prices that you farmers and ranchmen can afford to buy. Write for our bargain list and easy payment plan.

We also have several young bulls for sale, priced to sell.

THE PINE VALLEY DAIRY & FARMS CO.
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Bates Shorthorns

are the foundation blood of true Milking Shorthorns. We have them. A few bulls for sale.

THE CARPENTER CATTLE CO.
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Buy MILKING SHORTHORNS

from the oldest established herd in the state. We can supply your needs in bulls of beef type either horned or polled Shorthorns.

Write Superintendent for folder on breeding and prices.

State Industrial School,
Golden, Colo.

HOLSTEINS.

Only One Bull Left

Just one bull of serviceable age is left for sale in our herd. His dam made 15 pounds of butter as a yearling and will be tested for year's work this fall. She is a wonderful milker and the daughter of a 4-year-old with a year record of 25,208 pounds of milk and 878 pounds of butter, while the granddam of the bull's dam milked 108 pounds of milk in one day and 3,100 in 30 days. Two direct generations of 100 pound cows back of him. He is a good individual, mostly white, and sired by Denver Sir Segis, a 30-pound son of our senior herd sire, Johan Duchess De Kol Lad. What will this bull be worth to some good breeder?

Sanborn Meadows Holsteins.
MRS. R. G. DOUGLAS,
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4 Registered Holstein Bulls

FOR SALE—One 3-year-old; three 2-year olds. Three are direct descendants of Pontiac Korndyke 25982, and the fourth carries Dirkie, DeKol, Aaggie and Nemea strains. For further information address

THE NILES FARMS,
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We have bred hundreds of prize-winning and high-producing Holstein cows, including

Tilly Alcartra

We can supply you with that same line of breeding. Write

McKAY BROS., Caddoa, Colo.

WALLIE FARM REGISTERED HOLSTEINS,
4800 S. Penn, Denver. W. G. Foster, Owner
Home of "Colorado Count," whose 29 sisters broke 140 world's records.

Bulls of Serviceable Age for Sale

Excellent individuals. World's record blood. Terms to responsible buyers. Wallie Farm bulls are guaranteed.

PRODUCTION
TYPE SIZE
BREEDING

We offer you a wonderful amount of these Holstein qualities—and from a clean herd. Bull calves from fine record dams. Pahgre Valley Ranch, Loesch Bros., Montrose, Colo.

Buy a Calf Out of This Herd

Twenty cows in this herd on an official seven-day test averaged 446.13 lbs. of milk and 20.19 lbs. of butter.

COLORADO STATE HOME,
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D'ARCY HOLSTEINS

Have made good at home and they will do the same for you. A few choice calves can be purchased now at a price that can't help but make you money. Write

NORMAN R. D'ARCY
Parker, Colo.

GUERNSEYS.

GUERNSEYS

Sired by the Grand Champion bull at the 1921 National Western and State Fair, both male and female, are for sale. Write

H. D. PARKER
GREELEY, COLO.

Boost for Dairying.

A few profitable cows, some poultry, a few hogs, and some cash crops constitute the program being suggested to farmers at the various points on the Colorado & Southern railroad in a series of "Dairy Day" meetings to be held the latter part of February and forepart of March. It is generally agreed that diversification is the thing that will help to improve agricultural conditions in the various sections where these meetings will be held. The dairy cow will be the first and most important feature in developing a type of farming insuring a steady income throughout the year and supplying a market for much farm-grown feed otherwise unmarketable.

Cities and towns are co-operating in helping to make these Dairy Day meetings and exhibits a success, recognizing the close relationship of the town and country in bringing about any return to prosperity. Many unique features will be introduced to focus attention on the benefits of dairy farming and general diversification of farming methods. At towns where there are breeders and dairymen near, automobile tours will be arranged and on the farms visited the owner will explain his methods and practices. School children will have a part, particularly classes in agriculture. The speakers will talk to the children about dairy farming and dairy products and where possible give a moving picture show featuring dairying.

Speakers from the Colorado Agricultural college will be present at the meetings ready to give the details of successful dairy practice and answer questions. Regular speaking programs will be held in the forenoon, followed by basket lunches and in some cases luncheons given to those present by the local business men's organizations. Exhibits featuring dairying and telling vital stories of profitable dairy practices will be shown in the halls where meetings are held. A guessing contest will be conducted to show how difficult it is to tell what a cow will do simply by looking at her. A series of pictures of cows will be shown and those present will be asked to place them in the order of their production. After the guesses are all in the actual records will be given. There will be some surprises when the records are announced.

The best possible talent in the way of trained speakers who know all the ins and outs of the dairy business will be available and motion pictures of great educational value from the United States Department of Agriculture will be shown wherever the local facilities permit.

These Dairy Day programs are to be put on through the co-operation of the Colorado Agricultural college, the Colorado Dairy council, and the Colorado & Southern railroad. Among the men responsible for the high character of the program presented are Roud McCann, Director of Extension of the Agricultural college; Professor George E. Morton, animal husbandry department; D. W. Thomas, secretary Colorado Dairy council, and Earle G. Reed, agricultural agent of the Colorado & Southern Railway Co.

A partial schedule of the Dairy Day meetings follows: Parker, Colo., February 20; Advada, February 21; Lafayette, February 22; Elizabeth, February 23; Kiowa, February 24; Elbert, February 25; Eastonville, February 25; Broomfield, February 27; Walsenburg, February 28.

Western Slope Farmers Meet.

Farmers and stockmen of the Western Slope in session at Montrose the week ending February 4, went on record against government ownership of railroads. Hundreds of farmers and stockmen from this section were in attendance at this second annual conference of the Western Slope Livestock and Farm Congress. The government ownership idea was presented by Carl D. Thompson of Chicago, secretary of the Public Ownership League of America, who addressed the convention on the subject,. "Railroad Problems from the Standpoint of Labor."

The congress opened with a session of the Uncompahgre Valley Cattle and Horse Breeders' association. This organization sponsored the first congress a year ago and was responsible for the permanent organization. Dr. C. A. Dunaway, president of Colorado college, spoke the first day telling of the opportunities for success through education offered to the young men and women of the state.

A message from Senator Capper was read in which he urged the importance of co-operative marketing and declared that Congress at last was ready to give the farmer a square deal and that "the farmer is not to be kicked and buffeted about." James G. Brown saw a gleam of light ahead for sheep men, stating his belief that the industry on the Western Slope is on the up-grade. There are 200,000 sheep in Montrose county valued at $1,600,000, and wool which will be sold next May for $300,000, in addition to the lamb drop valued at $800,000. Senator Robert Rockwell of Paonia expressed the belief that the crisis had passed in the cattle business and that the present was a better time to stick than to get out. Dr. S. Quigly of the Gunnison State Normal school defended the expenditure of the state's money in higher education.

The status of the War Finance Corporation money in Colorado was presented by Lou D. Sweet. He explained the workings of the Colorado War Finance board on which he is the farmer member, and stated that at least $30,000,000 could be obtained for the state, altho to date only $4,500,000 had been distributed and $10,000,000 approved for Colorado.

Roads and national forest problems were discussed, District Forester Col. A. S. Peck speaking on the relation of the forest reserves to the grazing industry. Dean S. Arthur Johnson of the Colorado Agricultural college told of the value of birds in controlling noxious insects.

An afternoon was devoted to the farm bureau and the many problems confronting the sheep and cattle feeders of the Western Slope were given consideration. H. W. Coverdale, secretary of the American Farm Bureau Federation, spoke at this session on the subject, "The Farm Bureau Movement in the United States." Mr. Coverdale saw in the appointment of Senator Kenyon to the federal bench a political movement to remove him from his place of leadership in Congress of the farm bloc. He pointed out that there seems to be a movement under way to take farm bureau leaders out of active work by appointing them to political office. "The farm bureau organization representing 1,500 counties and having a membership of more than 1,000,000 farmers, to accomplish the most beneficial results, must be kept out of politics," declared Mr. Coverdale.

One of the really vital questions of the Western Slope is railroad service. President J. H. Young of the D. & R. G. said that it was the purpose of his road to give the farmers of the Western Slope the service they had a right to demand and this would be done as soon as the present company was fully functioning.

One session of the congress was given to a discussion of the boys' and girls' club work as a factor in promoting better agricultural conditions and a better understanding of improved agricultural practices.

A big banquet closed the congress. Covering as it did practically every problem affecting the interests of Western Slope farmers and stockmen, the congress brought much good to this section of the state.

Experts Teach Wool Grading.

Wool grading demonstrations are being given in all of the principal wool producing sections of Colorado this month by the state marketing department co-operating with the United States Bureau of Markets. Local fleeces are being used wherever they can be procured and wool producers are being shown how to grade and what constitutes the tentative wool grades established by the Bureau of Markets. Suggestions are being given on care of sheep and improvement in quality and condition of wool; preparation of wool for market; handling of the wool clip; marketing information; financing the wool grower; methods of selling wool; co-operative wool marketing and pooling.

The demonstrations are in charge of W. F. Heppe, extension agent in marketing for the agricultural college and the grading is being conducted by William E. Doble of the United States Bureau of Markets.

Points where grading schools are being held include Rifle, Grand Junction, Delta, Hotchkiss, Olathe, Montrose, Dolores, Mancos, Cortez, Durango, Monte Vista, Del Norte, Saguache, Walsenburg, Lamar, Kiowa, Deer Trail, Fort Collins and Greeley.

How much do you pay for the privilege of milking low-producing cows?

A woman's back is adjustable in height, but so is a sink.

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We want you to have this book. We want the readers of this magazine who do not buy at Ward's to know how much they can save, to learn the pleasure and satisfaction of always getting dependable goods—of always getting a Golden Rule deal every time they buy.

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Combine Beet Growing With Livestock Production—Page 3

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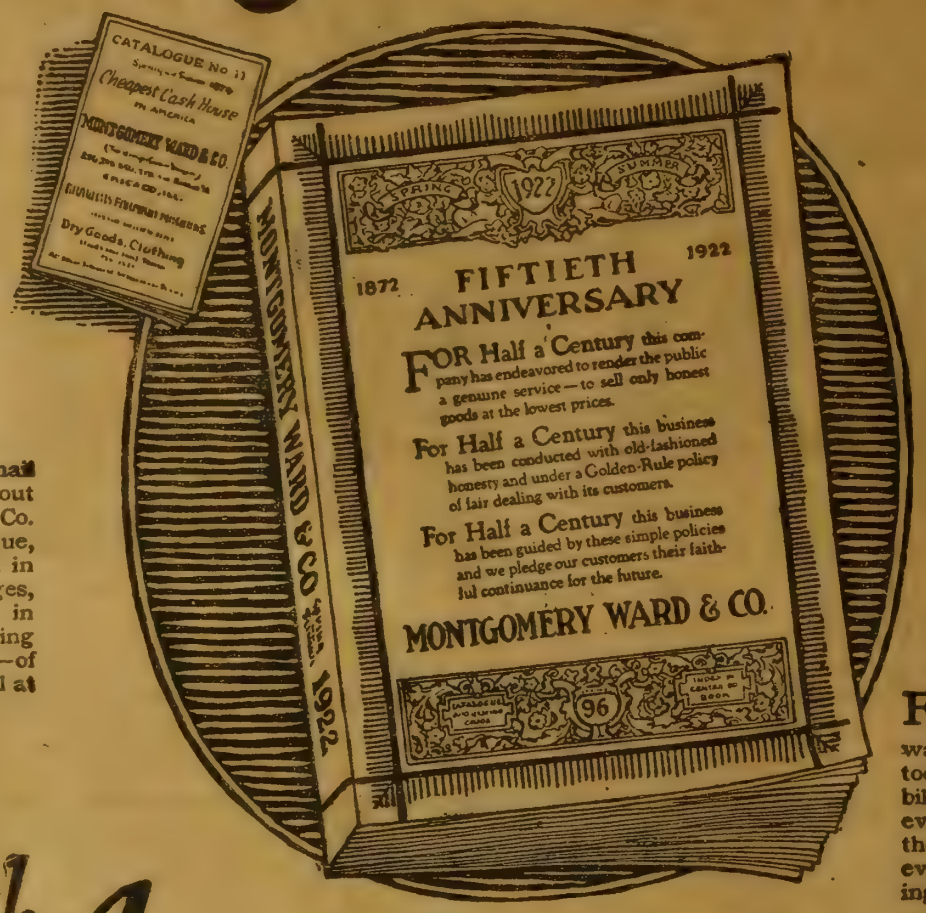
MAR 1 1922

WESTERN Farm Life

Vol. XXIV. *Denver, Colorado, March 1, 1922.* *Semi-Monthly*

Montgomery Ward & Co.

The Oldest Mail Order House is to-day the *most progressive* —



1872

THE first little one-page mail order leaflets were sent out by Montgomery Ward & Co. in 1872. The first catalogue, pictured above, was issued in 1874. It contained eight pages, about three by five inches in size. This was the beginning of the mail order business—of selling goods direct by mail at one small profit.

1922

FIFTY years of fair dealing, of prices that always offered a saving, and today this big Golden Jubilee Catalogue contains everything for the Home, the Farm and the Family—everything at money-saving prices.

50th Anniversary

This big Golden Jubilee Catalogue pictured above is priced to match the spirit of the times. Some things are priced at no profit, many things at very little profit. It is your best guide to the lowest prices.

THIS is the Golden Anniversary of Montgomery Ward & Co. We have completed Fifty Years in the service of the American Public.

In 1872 this business was begun in one small room, twelve by fourteen feet.

Today, millions buy from us on faith in the name: "Montgomery Ward."

Upon what is that faith founded? Upon Fifty Years of fair dealing, upon Fifty Years devoted to selling only goods of standard quality at the lowest possible prices.

This 50th Anniversary Catalogue keeps faith with our customers. It is priced to meet present-day conditions. It is filled with new, fresh merchandise with every price based upon the new low costs of production.

Some things at No Profit Many things at Little Profit

At Montgomery Ward & Co. we believe we owe a duty to our customers—that it is our duty to sell everything today at the lowest possible prices.

We believe we owe a duty to the American Farmer. Therefore, we are selling *all our Tillage Tools absolutely without profit to us.*

Many of these tools are actually priced at less than it would cost us to replace them today. This is the way we are keeping faith with the American Farmer.

And to the American Woman we are offering almost equal advantages—New York Fashions, selected in New York by Ward's own Fashion Experts. All are offered at the lowest prices possible today.

Everything needed in the home—everything to make the home more attractive—everything priced at a big saving for you.

The New-Old Spirit of Montgomery Ward & Co.

We are entering our second half century of business existence. And we step forward with the spirit of youth, of progress in Service and Saving for you.

To give you bigger and bigger values, to give you better and still better service, to quote always lower and lower prices—that is our work and our accomplishment today.

Buy from this 50th Anniversary Catalogue. Know that the price you pay is the right price for whatever you buy. Know that every order you send, every letter you write, will be handled in the full spirit of the Golden Rule.

If you have a copy of our 50th Anniversary Catalogue, lend it to your friends.

MONTGOMERY WARD & CO.

KANSAS CITY CHICAGO FORT WORTH
ST. PAUL PORTLAND, ORE.

If you have not a copy of our 50th Anniversary Catalogue, borrow one from a neighbor.

Western Farm Life

A Western Magazine for Western Farmers and Stockmen

VOL. XXIV. DENVER, COLORADO, MARCH 1, 1922. No. 5.

Combine Beet Growing With Livestock Production

MORE MILK, CATTLE, SHEEP AND HOGS MEAN MORE PRODUCTIVE SOIL

By George C. Wheeler.

COMBINING sugar beet farming with other profitable lines of agricultural production is the problem being worked out by the farmers of Fort Morgan and vicinity. Beet production has been the big industry, but this cannot endure alone. Last year more than 20,000 acres in Morgan county were in beets, one-fifth of the irrigated land in the county and more than 11 per cent of all the cultivated land in the county. "We must develop the sidelines and particularly the sidelines which help to build up the productive capacity of the soil," say farmers who have been growing beets extensively. The wide margins of profit of a few years ago cannot continue. Better methods, more fertile land, and increased tonnage are what the farmers see ahead in the beet growing business if it is to continue on a profitable basis.

Yearling steers on J. H. Roddiger farm in Morgan county, Colorado, turning alfalfa and beet pulp into beef.

Livestock feeding and livestock production are features of the farming in that section as adjuncts to beet growing. Feeding has involved heavy speculative risks and large sums of money have been lost. Despite this fact a number of feeders are feeding cattle in the yards at the sugar factory this year, using pulp and alfalfa hay as the main feeds.

Dairy Interest Increasing.

This type of feeding, however, is not the kind that will help to keep the beet industry on the map. The feeding on the farms and the introduction of dairy cows and hogs as regular lines of farm production are the things that are showing up more and more as the farming of the valley begins to shape itself along permanent lines in the minds of the thinking and forward-looking farmers. For example, Joe B. Tarr, a young farmer handling eight acres, is trying milking eight or nine cows and finds it is bringing in some regular money. He also has a few hogs, and informed the writer that handling these cows did not interfere with beet farming. He has made use of rye as a pasture crop, a 2½-acre patch supplying enough pasture for a bull and four cows last season. Milking cows is largely a matter of being sure of an outlet for the product. A number of farmers interviewed said they would milk cows if they could be sure of a steady and reasonably remunerative outlet for their milk.

P. D. Lynn is not waiting for the condensery, cheese factory or whatever the ones holding back may have in mind, but is going ahead with what market is now available. He started with nothing on a 160-acre farm several years ago and has been milking a bunch of common cows the past winter. He is just now trying to decide what breed to select to improve his milk stock, intending to use the purebred sire method of building up a good milking herd. He also is going in for more hogs, having got hold of a bunch of Duroc Jersey gilts and has bred them to a good purebred boar. His spring plans include fencing some alfalfa for the sows and pigs to run on as soon as the pigs are big enough to make use of pasture. A seventeen-acre field of irrigated corn went into his silo and lacking stock enough of his own to market his silage and alfalfa hay he made an arrangement with another man to take some cattle on the gain. "I figure I can get $6 a ton for my alfalfa without waste and at least $3 a ton for my silage," said Lynn, "and have all the fertility left on the place where I need it." A flock of high-class Barred Rock chickens was noted on this farm, and inquiry developed that they resulted from the purchase of a $6 cockerel last year, a case of a good purebred sire transforming the farm stock in a single year.

Manure Increases Beet Tonnage.

A bunch of cattle—120 head—on the Fred Keefover farm is converting alfalfa and other farm-grown feeds into marketable form. Mr. Keefover paid $5.15 a hundred for these cattle about the middle of January. In the four weeks they had been on feed they had made good gains. A little ear corn was being added to their ration and a bunch of stock hogs was saving the waste. A thousand bushels of corn were grown on the farm and some had been purchased at 55 cents a bushel. Figuring on the fertility is one of the points being considered in feeding these cattle. Mr. Keefover said that he expected to feed until the middle of April and was hoping to more than break even in view of present cattle marketing conditions and in addition was expecting to cover twenty-five acres of beet land with manure. In response to an inquiry as to the probable effect on the beet yield, he said: "I believe I can count on an increase of three tons to the acre as compared with similar land not manured." This would mean $15 an acre at $5 a ton for beets, and might easily turn out to represent the profit from an acre of beets. In this as in every line of cash crop production the higher acre yields are produced at a lower overhead cost a bushel or ton than the lower yields. Mr. Keefover is identified with co-operative farm enterprises, being secretary of the local beet growers' association and member of the Farmers' Union local executive committee.

Sheep Feeding Popular.

Sheep feeding is a line of livestock industry much associated with beet farming. Much money has been made and large sums lost by sheep feeders. There is perhaps nothing in the feeding line where the unexpected happens so frequently as in the speculative feeding and handling of sheep. This year sheep are making big money for those who could finance the purchase of feeders. J. Chas. Parker, who farms a quarter section, received $950 as his share of the return for a bunch of lambs he run on twenty acres of corn. He did not hold title to these lambs, simply obtaining the gain at the rate of 6 cents a pound, the price at which they went in. They cleaned up every leaf of the corn stalks and every green growth in the field and then started in on the grain. In addition to the lambs, thirty hogs run in this corn. It took the lambs six weeks to clean up the field and they gained nineteen pounds a piece. The gross return amounted to about $50 an acre. If Mr. Parker could have received what the lambs brought when sold it would have been double that. He is highly pleased with this method of turning a crop of corn into marketable condition. There was no waste of grain and everything on the land had been converted into meat and all the fertility evenly distributed. He has another bunch which he is finishing in his yards on alfalfa and grain.

Mr. Parker is actively associated with the co-operative endeavors of farmers of his community and the state, being president of the county beet growers' association, secretary of the Farmers' Union local, and member of the state executive committee. Farmers of this type are more and more realizing the necessity of working out their own salvation through co-operative methods, whether it be in studying out together the best kind of a farming system to adopt in a community or the matter of creating a more economical system of distributing their products.

Ewes Thrive on Beet Tops.

On another 320-acre farm a drove of well-bred ewes from the dryland range country to the southeast were cleaning up the feed and wastes of beet farming. Hyles D. Wood, the owner of this farm, took these ewes for the winter and is getting better than $4 an acre for the beet tops and $6 a ton for the alfalfa hay which he puts in the racks. The owners of the ewes find that they produce better fleeces and come up to lambing time in much more thrifty condition by this method of handling than when fed on the range. The exercise they get in ranging over the beet fields keeps them in the best of condition for lambing and the manure is put just where it is needed. Of course, there will be some to haul out from the racks where they are fed alfalfa. All these men raise sugar beets, but they realize the necessity for producing larger tonnages and finding a profitable outlet for other crops and a year-round job. Under the conditions now prevailing growing beets as an exclusive crop will not pay, and the working out of a stable system centered around this industry is essential.

Among the most extensive feeders of sheep are C. M. Stitt & Son, who now farm 320 acres. Mr. Stitt started with eighty acres about sixteen years ago. They now have well equipped yards for handling large numbers of sheep each year and are likely to make good money this season, which will perhaps make up for the heavy losses of last year.

Many Cattle on Feed.

Among the larger cattle feeders are J. H. Roddiger, who has well equipped yards and feeds pulp and alfalfa hay on his farm, and H. H. Schaffer, who is feeding 375 cattle of his own raising in the yards at the sugar factory. These cattle were put in last November and have made excceptionally good gains on pulp and alfalfa alone. It hardly seems possible that cattle could show so much quality and finish without grain as these cattle are now showing.

Some of the farming of this section omits beets entirely, but it is the exception. The San Arroyo Ranch, owned by Robt. W. Work, and managed by C. W. Pease, handles cattle exclusively. The ranch includes 1,000 acres of dryland pasture, and corn and alfalfa is raised on the irrigated portion. Forty-eight high grade Hereford calves are being made into toppy baby beef on aleraged 508 pounds in weight February 4. The silo is a very important part of falfa, silage and ground corn. They av- the equipment on this beef-making farm.

There is at least one outstanding dairy project in (Turn to Page 20)

Lambs in J. Chas. Parker's feed lots. Sheep feeding fits in well with sugar beet production.

Dairy Business and What the Future May Bring

DEPRESSION HAS AFFECTED FARMERS WITH MILK COWS LEAST OF ALL

Gilbert Gusler.

A YOUNG man about to make his start in life asked an older man for counsel as to some business that he might enter in which there was a good prospect of reasonable income and permanence. The older man said: "Go into the shoe business. As long as the babies are born barefooted, there will be a good demand for shoes."

The same logic applies to the business of dairying. Primeval man, it has been said, had two big problems: First, "What can I eat," and second, "What can eat me." The habit of eating has become well fixed, and so long as it persists the producers and purveyors of food to the human race can expect patronage. That the dairy cow is queen of the world's animal food producers, is not open to dispute.

Even so, no man is justified in proceeding blindly even in the business of dairying. Men who invest hundreds and thousands of dollars in dairy cattle and equipment and tie their business success to the old cow's tail, will be more resourceful if they have a broad knowledge of the varied aspects of the dairy industry. Those who were relying upon condenseries last fall as the sole outlet for their milk, had this fact impressed upon them. The dairyman should have information on the markets for his product and know the conditions favorable for milk, butter and cheese production. He should know the costs of production and the competition from substitutes made in this country and dairy products from abroad.

Hard Times Affect Dairying Least.

Barring scattered localities and brief periods of time, dairymen have come through the trying period of readjustment following the war with more comfort than most other groups of farmers. Feed costs have declined in most cases more rapidly than the price of dairy products. The following comparison of present and of pre-war farm prices for the entire United States tells part of the story:

	Farm price November 1, 1913.	1921.
Corn, per bushel	$ 0.707	$ 0.411
Oats, per bushel	0.379	0.292
Hay, per ton	11.51	11.13
Butter, per pound	0.282	0.409
Veal calves, per 100 pounds	7.72	7.61
Milk cows, per head	56.47	53.39

Of course, there are other elements in the equation, such as labor, purchased feeds and supplies. On the whole, the picture is far from a distressing one.

One-fifth of the food budget of the average American family goes for milk and its products. The dairymen, supported by some of the dietitians, contend that this should be doubled at least.

This cow, Korndyke Sarcastic Jolie 2d, owned by Colorado Agricultural College, was grand champion at National Western Stock Show, 1922.

The Department of Agriculture estimated total milk production in the United States in 1920 at 89,658,000,000 pounds. This was about 400,000,000 pounds less than in 1919. Milk for household, both city and country, was more than twice as important as any other item. Creamery butter was second, and farm butter a close third. Condensed and evaporated milk, cheese and ice cream occupy the next three places so far as human consumption is concerned, and are about equal in importance. They are of much less consequence than the three preceding.

Putting these figures on a percentage basis, whole milk was 43 per cent of the total, creamery butter 20 per cent, farm butter nearly 15 per cent, condensed and evaporated milk 4½ per cent, and cheese and ice cream about 4 per cent each.

Whole Milk and Butter Dominate.

It follows from these facts that the outstanding influences in the markets for dairy products are whole milk prices and butter prices. The number of producers interested in them is far more numerous than the number interested in all the others combined. It becomes evident, also, that the whole-milk marketing problem is closely interwoven with the butter marketing problem.

To supply the domestic demand for these dairy products we have the largest number of milk cows of any nation in the world, with an annual production per cow that is constantly increasing, although the average cow in Denmark and Holland produces twice as much as our own. We have also by far the largest number of purebred cattle of the dairy breeds. We have, especially in the northern half of the United States and reasonably near the consuming centers in large cities, a vast area adapted to dairying. With a temperate climate and ample rainfall, here is an abundance of pasturage for summer dairying. We have corn, the wonder crop, to furnish cheap concentrate and silage for the winter, broad expanses of hay-producing territory here in the West, and a group of farmers with the industry, intelligence and natural aptitude necessary for success in dairy production.

Production per cow is on the increase. In 1910 it reached 362 gallons annually, but in the 1920 census it bade fair to surpass the 400-gallon mark.

Consumption of milk and milk products expressed in terms of whole milk seems to have been practically maintained, so that the dairyman is keeping his home market. Milk production increased 18.6 per cent, while population increased only 15 per cent. The small excess of production is fully accounted for by larger exports in the last census year than in 1910.

Sales of whole milk from farms increased 30.6 per cent in the census period, rising from 1,937,000,000 gallons in 1909 to 2,529,000,000 gallons in 1919. Part of this increase is due to larger sales in the form of whole milk in cities and towns, but probably half of the increase represented larger sales to condenseries. New York, Wisconsin, Pennsylvania, Illinois and Ohio are the leading states in the amount of whole milk sold from farms. Cheese factory production very likely enters in these standings.

Increased Appreciation of Milk.

A continued increase in deliveries of whole milk to the urban doorstep can be expected confidently as city populations grow and become more appreciative of the value of milk in the diet. Undoubtedly, in countries where the people are able to choose, they are feeding themselves more scientifically year by year as the knowledge of dietetics spreads. "Milk is a wonderful juice" and an increased use of whole milk is natural in this dietary evolution.

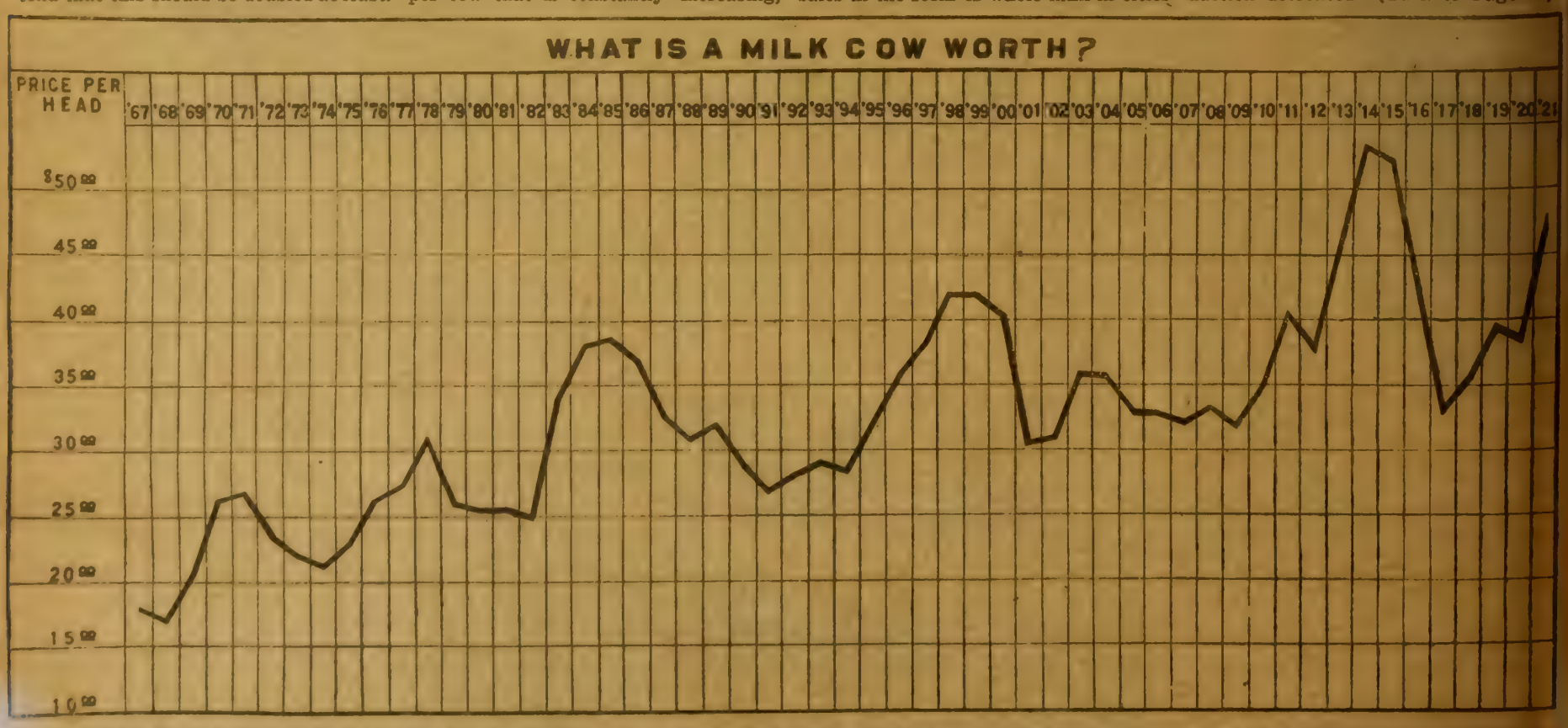
The condensed and evaporated milk industry has undergone remarkable expansion in the United States in the last ten years. In 1909 only 494,796,544 pounds were manufactured, but by 1919 the total had grown to 1,925,000,000 pounds.

Along with the growth in production of condensed milk there was an enormous growth in our export trade. European production declined owing to a shortage of feedstuffs, while demand increased and countries such as the United States, Canada and Australia were drawn upon for the supply. In 1919 our exports of condensed and evaporated milk exceeded imports by over 800,000,000 pounds, which was even larger than the production for that year. But the foreign outlet suddenly contracted early in 1920. Domestic consumption also decreased. Condenseries continued to produce on nearly the same scale as in 1919 until the last quarter of the year, when many of them closed suddenly and left the producers without a satisfactory market for their product.

Butter Production Below Consumption.

In the butter industry, production on farms is decreasing. In 1909, 994,650,000 pounds were produced, while the last census shows only 707,666,492 pounds, a decrease of 29 per cent. The Southern states still show a high percentage of farm make. Creamery butter production is increasing, however, the total being 624,764,653 pounds in 1909, and about 851,000,000 pounds in 1919. Wisconsin and Minnesota almost tied for first place in sales of butterfat from farms in the last census year, although it is probable that part of Wisconsin's butterfat output should be credited to cheesemaking.

It is significant that total butter production decreased (Turn to Page 20)



The chart shows variations in the buying power of milk cows per head. The values per head as reported by the Department of Agriculture were modified by the use of wholesale prices in order to eliminate variations in the purchasing power of the dollar. The high points in the line show when milk cow prices have been high compared with other things, while the low points show the reverse. Note that the line shows a gradual upward trend. Although milk cow prices declined from 1920 to 1921, the line above turned upward because the decline in other things as shown by Dun's index was much more drastic than in milk cow prices.

Seventeen Consolidated Schools in El Paso County

EIGHTEEN HUNDRED RURAL CHILDREN ENJOY MODERN FACILITIES

C. G. Sargent,
Department of Rural Education, Colorado Agricultural College.

EIGHTEEN hundred country boys and girls are now enrolled in the consolidated schools of El Paso ounty, Colo. Seventeen high schools ave been established where none ex-ted before in which are enrolled 285 upils. Sixty old schoolhouses have een abandoned and replaced by seven-een new, modern buildings. These con-olidated schools of El Paso county, ome of which have been in successful peration for six or seven years, are: 'ountain, Ellicott, Eastonville, Falcon, nez Johnson-Lewis, Squirrel Creek, 'eyton, Ramah, Yoder, Drennan, Miami, Edison, Tructon, Hanover, Table Rock, 'alhan and Lytle.

While the reorganization of the dis-ricts was of prime importance, was xtensive in character and far-reaching n its results, the improvement was not llowed to stop with this step, import-nt as it was. Trained superintendents nd efficient teachers have been em-loyed. The schools have been careful-y graded. Four-year high schools al-eady have been built up in a few places, wo-year high schools have been organ-zed in the other schools, and these are eing extended to three and four-year chools, as conditions warrant. Aided by ise, helpful, and efficient supervision rom the county superintendent and the ssistant county supervisors from her ffice, the work of these schools already as reached a standard of excellence eldom attained in rural schools, and he districts are rapidly learning to use community organization in a manner hat was unknown before consolidation.

Two of these fine new schools, Pey-n and Calhan, have introduced courses n vocational agriculture and receive tate and Federal aid in support of this ork. Others are now making applica-on for similar co-operation, and all re earnestly striving for the best that within their power to secure.

Colorado Leads in Rural School Improvement.

Colorado now occupies an enviable osition as regards its accomplishments n the nation-wide campaign for the im-rovement of rural schools that is now weeping the country. Educators are uite generally agreed that if our rural chools are to be permanently and ade-uately improved the system itself must e reorganized. Of all plans yet pro-osed and thoroughly tried the consol-dation of districts and the centraliza-on of schools has accomplished the ost and still promises the most for the ture. Many of the reorganized rural chools of Colorado are known all over he United States.

In a movement of this kind it is but atural that certain sections should orge to the front and take positions of onspicuous leadership. El Paso county ow occupies such a position among the ixty-three counties of Colorado. The writer first visited this county for the purpose of inspecting its rural schools some twelve years ago, and has been a frequent visitor since that time. What is here written is with intimate knowledge of the development of the campaign for rural school improvement in the county for more than a decade.

Many Objections Are Raised.

When the consolidation of rural schools was first proposed for El Paso county, the suggestion was not received with favor either by the school directors or by farmers generally. It seemed that the regular stock of ready-made and ever-present objections always offered to consolidation were in this county reinforced by others, a few of which seemed to be almost, if not quite, unsurmountable. It was pointed out that at certain times in winter sudden and severe storms raged over the eastern portion of the county, sweeping along the "divide" which separates the South Platte and Arkansas river basins, sometimes assuming the proportions of blizzards and blocking the roads with drifting snow that would make any kind of transportation dangerous, and the successful conveyance of children to and from consolidated schools entirely impossible.

Now, it is a fact that this county had been blessed with efficient county superintendents for many years, and their watchword seems to have been that there is nothing too good for the country boys and girls of El Paso county. If some new improvement developed in another county it was not long in finding its way into this progressive county.

After carefully investigating the merits of the consolidated school, an educational campaign was started in 1913 and 1914. At first the people felt sure that a consolidated school could not be operated successfully in El Paso county. However, gradually one community after another yielded to the arguments for better schools until more than a dozen consolidated schools had been established where people said, in a very emphatic way, that it simply could not be done.

Difficult Conditions Overcome.

Now it happens that the southeast third of the county east of the mountains was made up of three very long and very narrow districts. One was thirty-nine miles long and seven and one-quarter miles wide; the second thirty-nine miles long and three miles wide, while the third was twentyfour miles long and three miles wide. These three districts extended from the foothills at the base of Pikes Peak to Lincoln county on the east. On one occasion the writer, while assisting in the consolidation campaign, visited a oneroom school in the eastern end of these districts in the morning, drove twenty miles, took dinner, visited another school and addressed a community meeting, made a long drive and in the evening held another community meeting in the western end of the same district.

These three districts were carved out in this peculiar shape in order to permit two very large railroad systems to contribute to the financial support of the twenty-three oneroom schools which they maintained. These districts were parallel and contiguous and while the consolidation campaign flourished in other parts of the county, the difficulties here encountered baffled the county superintendent and seemed to defy all attempts at reorganization, until finally "Eureka!" the combination was found, and by a series of transfers of territory from one district to another, the result of months of study, many public meetings, scores of conferences and three or four lengthy petitions, signed by long lists of patrons, the county superintendent cut the three districts north and south and welded them together east and west in such a way as to make them approximately square, giving them approximately equal valuation, and making it possible to centralize all of the schools in each of these newly formed districts.

Tructon Consolidated school, El Paso County, Colorado. A true community center.

Two of these districts have centralized their schools and fourteen one-room schools have already been abnadoned and the third district has voted to do the same. When this reorganization has been perfected the remaining nine of the original twenty-three will be abandoned. This instance is the most extensive and at the same time the most unique scheme for rural school improvement by transfer of territory that has ever come to the writer's attention, and confirms the opinion often expressed that much rural school reorganization can be effected by the transfer of territory and without a consolidation election.

Fountain is the only district in which a town of any considerable size serves as the center. A few others are located in small villages, but the larger number are located in the open country. These fine schools literally dot the plains and foothills of El Paso county and practically all that portion of the county east of Colorado Springs has reorganized its rural schools. Today Ellicott, Ramah, Tructon, Drennan, Peyton, Calhan, and the others represent well-organized and well-defined rural communities, the efficiency of whose schools is recognized.

Consolidation Giving Satisfaction.

While the movement is still new and while all of the difficulties have not yet been overcome, still there is no thought of ever going back to the old system. And since the campaign was started the eastern part of Colorado has been visited by two of the most severe snow storms that have occurred within the memory of the present generation. At times the elements have spent their fury on eastern El Paso county, within recent years, as of yore. And so will it continue in the future. The temperature has dropped to the danger point where traveling on the wind-swept plains was not a pleasure and the snow has drifted into the lanes and highways temporarily impeding travel. But, on the whole, there have been many more days of school since consolidation—a regularity of attendance that was never before known, and these children now have advantages and opportunities that were never enjoyed in the old schools before consolidation was accomplished.

These are community schools made possible by a majority vote of the qualified electors in each district; and other counties and many other communities may have good schools like them whenever they are ready and willing to put forth the effort to secure them.

Market Outlook for Farm and Ranch Products

THE STAGE IS SET FOR AN ADVANCE IN THE CATTLE MARKET

Edited by Glenn G. Hayes.

JANUARY was a constructive month in the farmer's markets. Hog prices averaged over $8 per hun-red pounds at Chicago, which is at east $1 higher than seemed probable ixty days ago, and the top of the mar-et is now above $10. Fortunately, too, he higher level was reached while armers had many hogs still to be sold o that they will receive the benefit of t. The advances in the sheep, lamb nd wool markets have healed many of he wounds received a year ago by hose engaged in the sheep industry. Steers are paying for their board in nost cases and the cattle market ap-ears about ready to follow the upturn n hogs and lambs. Butter and eggs ave not performed so well recently, as roduction has shifted in that direction, ut they are still on a paying basis.

After slumbering for weeks, the bull-sh situation in wheat has manifested tself and prices equalled the highest evel reached since last June. Farmers re selling corn at the most rapid rate ver known, most of it bringing 5 to 0 cents a bushel more than was paid en weeks ago, and buyers are greedy for it, as they realize that it is on the bargain counter. Oats and rye have been slow to respond, but both of these grains will ultimately follow the course of the rest of the list.

A number of farm commodities are now bringing nearly as much as and in some cases more than they did this time last year, and most of them are higher than the prices at which they sold some time in 1921. Costs of production have decreased, so that the farmer's net return on such products is much more satisfying than a year ago.

Cattle Market Improving.

Although receipts of cattle at the leading markets in the last two weeks have been slightly greater than the average for the last seven years, they are actually higher than in the latter half of January. Prices have shown greater firmness and it is possible that the long anticipated period of improvement is at hand.

It is the general belief that the cattle placed in feed lots last fall have been marketed at an excessively rapid rate and that there is but little prospect of a heavy supply later on. With both the hog and the lamb markets booming and with employment in industries on the increase, the fat cattle market is logically due for an upturn. The Lenten season is not far away. Whether it will cut more of a figure than usual remains to be seen. It is too much to expect great enhancement in values until after this hurdle has been passed.

Price advances made slight headway during the past week. Cattle feeders took a large share of the receipts and a small amount of buying for export occurred at Chicago. Steers with weight are more popular, although no prime yearlings are arriving to test out the market for light cattle.

Cows and heifers have advanced more than steers. Only a light supply of grass beef from Texas is expected during the spring months, so that the seasonal upturn in butcher stock prices promises to come to pass on schedule time.

Feeder Movement Expands.

The movement of stocker and feeder cattle has increased recently and is larger than usual at this season of the year. Shipments from the nine leading markets during January were 183,000 head, compared with 145,000 head in January, 1921. The outgo for February at Kansas City is expected to set a new record. Many are being bought to rough through until the rise of grass. Some fleshy feeders also are going out, although prices appear dangerously close to the level of fat steer values. The demand from this source has given substantial support to the fat cattle market.

Interest in breeding cows is on the increase and the tone of the entire cattle industry has improved in the last two or three months. In Kansas and Oklahoma bargaining for cattle and for grass is under way, but few transactions have been closed. No wild furore

(Turn to Page 12.)

What Shall We Plant as Emergency Crops This Year

MARKET CONDITIONS PROMISE GOOD PROFITS FROM PINTO BEANS

WHAT shall I plant if my winter wheat has winter-killed, is a question being asked by a good many farmers as the extent of winter damage develops. No one can foretell the extent of abandonment and the individual farmer finds it difficult to decide whether to let his wheat go or put in some other crop. Winter wheat sometimes comes out in a most unexpected manner if spring conditions happen to be favorable. There are other questions such as the matter of feed crops or planning to have some emergency pasture crop coming on at the right time to take care of stock—dairy cows or hogs which may now be on hand and requiring pasture to make the new venture profitable. Perhaps it is highly important that there be something which will bring in some ready cash at the earliest possible date.

Spring Small Grains Uncertain.

A condition which is with us every year is abandoned winter wheat acreage, occasionally running as high as 10 or 12 per cent of the total planting. In deciding what to do with badly damaged or entirely destroyed winter wheat, consideration must be given to several conditions. As a rule lack of available moisture at planting time or in the period immediately following seeding is mainly responsible for winter killing. If this is the condition the planting of spring cereals as barley, oats or spring wheat, which will probably be the first thing considered, will be more or less of a gamble. These crops are absolutely dependent on the supply of moisture and the same conditions which caused the wheat to fail will be most unfavorable for these spring cereals. The statistics for Colorado show, however, that spring wheat on the non-irrigated lands yielded in 1921 slightly more to the acre than winter wheat in the same areas. Under normal conditions our most successful winter wheat growers say spring wheat cannot compete with winter wheat on non-irrigated land if the winter wheat is properly put in. If we had the results from putting spring wheat on land where winter wheat failed we would probably find that the yields were below the average for all the spring wheat. The point to keep in mind is that if conditions of soil moisture and tillage were such as to result in winter wheat failing too much cannot be expected of spring wheat. Results will depend on whether spring moisture is plentiful and other conditions more than usually favorable. In many instances of course the winter wheat is simply killed out in patches or thinned. Under such conditions it might be advisable to drill in spring wheat in the patches left unoccupied or but thinly occupied.

Barley Good Feed Crop.

Barley is another spring grain to consider for emergency planting. Barley is an excellent feed. Milk cows do well on barley grain, rolled or ground. It is a good grain for hogs or horses. Last year the non-irrigated barley made larger acre yields in Colorado than either spring or winter wheat. Barley is of course a feed crop and does not have the cash outlet of wheat. As a feed crop it is worthy of consideration, for feed is a necessity, and barley does not have to be matured as grain to be of value as feed. Cut in the hard rough stage it makes a rich hay valuable alike for horses or milk cows, in fact, horses like it too well and it should not be fed to them except in limited quantities. Barley straw also has a good feed value. Barley is a crop to give consideration if there is likely to be any need for some good feed, either forage or grain.

Expert Advises Summer Fallow.

Growing crops under dryland conditions is almost entirely a matter of moisture storage and conservation. If there is a shortage of available moisture a profitable crop cannot be grown. More winter wheat could be grown in Colorado under dryland conditions if summer fallow methods were more generally followed. Dr. V. T. Cooke of Strasburg believes that no better use could be made of land on which last fall seeding of wheat has failed than to begin now to prepare for next year by plowing early and then giving the land such tillage through the summer as to keep all weed growth down absolutely. All is lost if a crop of weeds is allowed to grow on a piece of summer fallow. The object is to let in what water falls and then keep it from escaping by evaporation or through the growth of any form of vegetation.

Beans Good Cash Crop.

Another crop and one which should appeal to many dryland farmers is beans. Colorado and New Mexico almost have a corner on the pinto bean production and at the present time there are hardly enough beans available for seed in this section. There are not 50 cars of unsold beans in the country, according to information given by bean dealers. For the next six months bean distributors will have no supplies to feed the trade. From the peak production of about two hundred and fifty thousand acres in 1917 and 1918, the acreage in Colorado has declined to 65,000 acres in 1920, and 40,000 in 1921. The Rocky Mountain Bean Jobbers' association, which has developed the market for the beans of this section, state that they could place the production of at least 100,000 acres of beans at prices profitable to growers. The low price which came so abruptly after the exceedingly profitable prices of the war period were unsatisfactory to growers, but the prices to growers now is at least $5.00 a hundred and is not likely to be lower for the next crop. That means a gross return of $25 or more an acre.

The jobbing association states that the bean growers of Colorado and New Mexico have a distinct product, which has lived through the competition of the Oriental colored varieties imported into this country. Statistics show that the only sections of the United States where the consumption of dried beans is increasing are those served by the distributors of the Colorado and New Mexico pintos.

It would probably be a mistake to increase the acreage to that of the peak period, but there seems ample justification to expect an outlet at satisfactory prices for at least a much greater acreage than has been grown the past few years. Many maintain that next to the potato the bean is Colorado's most important vegetable crop. They are drouth resistant, and being legumes are soil builders, bringing readily available nitrogen to the soil direct from the air. On land which was well prepared for wheat last fall a good thorough disking is all the preparation necessary. Most of the elevators are equipped with machinery for cleaning and handling beans and the necessary cultural implements are fairly well distributed on the farms in the bean growing sections. The crop makes an excellent rotation crop to precede winter wheat. M. E. Knapp, county agent of Weld county, who has watched the results obtained in growing beans in that section, believes beans a far safer crop to plant on land where winter wheat has failed than spring wheat or barley

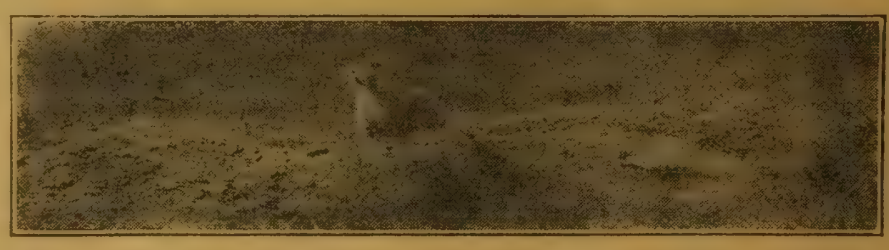
There may be some difficulty in getting seed for the bean supply is very low. Seed firms may be disposed to take advantage of this situation, but it would be poor policy for them to do so. This is an industry which should eventually become an established feature of the plains agriculture. Elevators with some beans in store would be doing their communities a service by retaining what they have for seed rather than to cash them in at the better prices now prevailing for market beans.

Farmer Must Make Own Decision.

No one can safely tell a farmer what he should plant or exactly how he should handle his land. The man who uses his head and studies his farm knows more about it than anyone else could possibly know. He is the man who must make his decisions after considering all the conditions and making as good a guess as is possible as to future developments based on a study of the past. There are many crop risks which a farmer must take, risks over which he has no control. About all he can do is to so plan his operations so as to avoid the possibility of a single unfavorable circumstance making his whole year's work a total loss. The old adage of not putting your eggs all in one basket applies to farming and should be heeded as far as practical. With part of his capital invested in livestock, or in a variety of crops other than the main money crop of the section, he is less likely to face serious loss, for the some condition which would seriously injure one line may not so seriously affect another. Diversification thus becomes a form of insurance.

In planning operations or changing plans already made, which is of frequent necessity in farming, the individual farmer must safeguard himself in every way possible and try to minimize possible losses resulting from things happening over which he has no control. Talking over these common problems in community meetings such as Grange or Farmers' Union locals, often brings to light valuable knowledge. There is always strength in united counsel and one of the live topics for discussion in such meetings would be the questions raised in the foregoing having to do with the working out of cropping plans for the coming season.

Some valuable information on the bean situation as to supplies and probable demand for the coming year appears on another page of this issue.



Kill Off the Prairie Dogs

LAND WORTH $60,000 RECLAIMED IN ONE COUNTY.

Orille Bourassa.

KILL 'em off," may sound like a bloodthirsty slogan to the casual listener, but to the man in the prairie dog regions it means business. Thousands of dollars are lost every year to farmers in these districts through the ravages of the dogs. These dogs are prolific breeders and they have "gaul" enough for animals a dozen times their size. If you give them space for one hill on your land they soon claim space for twenty-five hills. And, once they get in, you can get rid of them only by killing them off.

In McPherson county, Kansas, which is on the eastern border of the prairie dog country of Kansas, frequent attempts had been made by various owners and tenants of infested lands to rid themselves of the dogs, but either their poisoning did not get all of the dogs, or their land was re-infested from neighboring towns, and the prairie dog pest continued to harass careful farmers. Sometimes bitter feelings grew between neighbors and communities because of the dogs. Acres of pasture lands were held by the animals and any wheat or other grain crops which happened to be planted near the dog towns were partially destroyed.

One woman near McPherson, the county seat town, had paid taxes for years on land valued at about $100 an acre, 20 acres of which the prairie dogs rendered absolutely useless to her. They held their town in her pasture and kept the grass so close the pasture could be used but little if any to carry her stock. More than that, last spring they ate the wheat which inclosed three sides of the pasture on a strip five rods wide.

Twenty miles east of this place, near Canton, prairie dogs were holding down 80 acres on one farm. In fact, so big was the dog town the people in and about the country had come to call the place "prairie dog city." For thirty-five years the prairie dogs had claimed land on this man's farm. Each year they had added more acres to their town and each year had reached out just a little further into his hay crop.

More than thirty years ago the owner of the farm started a war on the dogs, but some of them managed to scrape through each poisoning, and soon repopulated the colony.

"We've got to put a stop to this leak from our farm income," the farmers of the county agreed finally, and, headed by their county agent, they secured the cooperation of every township in the prairie dog district, and put on a complete prairie dog extermination campaign.

The trustee in each township hunted up every prairie dog town, and reported the location of each and the size, to the county agent.

Poisoned oats were furnished at cost by the zoology department of the Kansas State Agricultural college. Carbon bisulphide which was also used, was bought at wholesale.

Early in March the first round of poison was set out. Every burrow in the district was visited and a good meal of poisoned oats left near the entrance.

The second poison round was made a month later. The farmers in the district went to the prairie dog towns and filled up all the burrows about 24 hours before the poison squad was due to arrive. This was done with the idea that the prairie dogs would have time to uncover their own holes, but would not have time to open up any other than their own. Thus, poison would not need to be used at the burrows whose occupants had been killed by the first poison round, and a material saving in the poison effected.

Fearing that some of the dogs might have taken only a light dose of the poisoned oats and managed to pull through but be too wise to take bait again soon, carbon bisulphide was used on this round instead.

The poison was put on corn cobs and placed in the openings of each open dog burrow. Carbon bisulphide evaporates rapidly, producing a heavy, poisonous gas which settles to the bottom of the burrow.

The final or clean-up tour was made the latter part of July. Carbon bisulphide was again used, and on this trip the last dog was killed off.

The actual cost of killing off the prairie dogs in this county-wide campaign did not amount to more than $300, yet it reclaimed $60,000 worth of land for the county. The poison oats, including the express, cost slightly over $120, and the carbon bisulphide cost in the neighborhood of $160.

This reclaimed land, 1,200 acres in all, is no longer a dead weight on the hands of land owners and tenants, but is being worked over into producing soil. More than this, the farmers are not continually harassed with dogs from "the other fellow's farm," nor with prospects of endless war on the prairie dogs.

Colorado Wins at Wichita.

In the strongest show of Shorthorns ever made in Kansas the grand championship in females was won by a Colorado exhibitor, at the Kansas National Livestock Show. After winning first in a ring of 11, Max-Mill Susan, the senior yearling shown by the Maxwell-Miller Cattle Company of Arapahoe county, was made junior and grand champion. This firm also had the senior champion cow. The Allen Cattle Company of El Paso County, Colo., also much ringside comment. The showing made by the Colorado exhibitors excited fords also Colorado came to the front, Crystal Mischief, the junior yearling heifer shown by the Ken Caryl Ranch of Arapahoe county winning first in class and junior championship honors.

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Cover Page Picture.

The picture on the cover page of this issue is of the Jewelfield Dairy farm barn and silos in Morgan county, one of the thoroughly up-to-date dairy barns in Colorado. This is a diversified farm on which purebred dairy cows and milk production combined with hog growing constitutes the main livestock industry. Sugar beets, alfalfa and corn are the main crops.

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Real Dairymen Should Stick.

No other farm business came through the strenuous times following the war in such good shape as dairying. When the bottom dropped out in other lines of farm production and prices of dairy products and poultry and eggs remained up it was but natural that every one should turn to the dairy cow, the brood sow and the hen. As a result from all over the country are now coming reports of surplus production of milk and dairy products. Figures from milk producers' associations and butter manufacturers' organizations substantiate this statement. To the man who has definitely worked at building up a permanent dairy business on his farm this situation may seem rather disconcerting. He is being forced to suffer and may be wondering whether he might not have made a mistake in going into the business so definitely.

May we offer a few encouraging suggestions. The genuinely successful dairyman is not an in-and-outer. He may suffer temporarily when every Tom, Dick and Harry jumps in and milks any kind of a cow as is now being done. Many of these individuals who took up the milking of cows due to the fact that it was seemingly the only profitable line of production, are not real dairymen, although some of them may develop into dairymen. Most of them will sooner or later drop out as they find that milking cows is no get-rich-quick scheme and requires more than the average amount of technical ability and skill. The real dairyman who keeps on sawing wood, improving his methods and breeding up and developing the producing capacity of his herd will not lose out in the long run, even though for the time being he may be compelled to accept a very narrow margin of profit. This is no time for the real dairyman to get out. It is rather just the time to stick.

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Cheering News From Washington.

No longer need farmers fear being haled before the courts as criminals because they attempt to organize cooperatively to sell their own products. The passage of the co-operative marketing bill is one of the biggest victories the farm bloc in Congress has achieved. The bill was signed by the President, February 18, in the presence of the agricultural bloc and representatives of leading farm organizations. Coming on the heels of the agricultural conference in Washington, which brought to the attention of the whole country as never before the real facts as to the economic status of farming, the obtaining of a co-operative marketing law brings added encouragement to farmers.

The difficulty some of our leading farm organizations are having in co-operating among themselves is a cloud in the sky which we hope soon will pass away. Each for all and all for each, the true principle of all co-operative effort cannot become fully operative so long as jealousies and petty bickerings among farmers and farm organizations continue. The adoption of the principles of the Golden Rule, both in dealings between individuals and between seemingly conflicting organizations, alone can bring perfect harmony. Progress is being made along this line. Just at present a disturbing influence is the attempt to form a farmers' political party which is being initiated by the more radical elements in farm organizations in conjunction with labor organizations.

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Getting More Out of Tractors.

"Thinkers not tinkers get most from their machines," said a tractor expert at one of our agricultural colleges recently. The short life of the tractor is charged as a shortcoming in making power farming more profitable. The life of a tractor can be doubled if the operator thoroughly understands the particular machine he is using. This knowledge must be acquired, not by simply tinkering with the machine, but by careful study and obesrvation. The instruction book which comes with the tractor is the best authority for that particular machine. A conscientious study of this book will give the operator a practical working knowledge of all its parts. This will help him to detect many small troubles before they develop into big ones. It will tell him what oils are best for the various parts of the machine. The operator will seldom go wrong if he follows the recommendations of the manufacturer. Another thing which shortens the life of tractors is overloading. Don't do it.

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Push the Spring Pigs.

If you can beat the other fellow to the market you are more likely to realize a good return on your spring crop of pigs. The fall break in prices almost invariably comes when the big runs of hogs strike the market. If you are a good caretaker and feeder you can bring your spring pigs, farrowed as late as May 1, to market in October weighing 200 pounds. This cannot be done, however, without pushing the pigs from the very start. It means getting the sows and the litters on full feed within ten days after the farrowing. It means the use of self-feeders so that the pig never knows what it is to get really hungry. Feeds are cheap as compared with the present market price of pork. Those who have spring pigs coming on, may well consider the matter of pushing them so as to get them on the market as early as possible this fall.

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"Means End of Board of Trade."

Fear that the development of farmer co-operative marketing plans means eventually putting the Board of Trade out of existence is clearly shown in the lengthy brief filed in the United States District court in Chicago attacking the constitutionality of the grain marketing control bill. All through it is pointed out in referring to the plans of co-operative marketing, and particularly those being worked out by the U. S. Grain Growers, Inc., that they have as their purpose marketing grain at cost without paying any of the commissions now charged. This, they say, would make it impossible for the board to maintain sufficient members to meet the expense of the exchange. In the congressional investigation of the charge made that a quarter million dollar fund was appropriated to fight co-operative grain marketing, Charles Quinn of Toledo, secretary of the Grain Dealers' National association, testified that $72,657 had been spent in "educating the farmer as to the evils of co-operative marketing."

The method of attack has been changed, but the fight is still going on and in more insidious ways. Farmers will do well to watch developments closely. It may be expected that the next attack will be in Congress and in other governmental high places.

Farmers Can Co-Operate.

An event of more than ordinary significance occurred at the annual meeting of the Kansas State Farm Bureau recently held. It marks a definite forward step in co-operation between farm organizations. The Farmers' Union has made good progress in the establishing of co-operative livestock commission firms on the markets of Omaha, St. Joseph, Kansas City, Denver and other points. The Kansas Farm Bureau passed the following resolution, introduced by John Frost, a Farmers' Union man from Marshall county, who is also actively associated with the farm bureau work:

"In the spirit of co-operation with other farm organizations we endorse the Farmers' Union livestock commission companies of Kansas City and St. Joseph and urge our farmer shippers to consign their livestock for sale to this farmers' firm. We further instruct our president and secretary to convey to the officers of the National Livestock Producers' association our belief that the urgent necessity of harmony among farm organizations makes it imperative that no new farmer livestock commission firms be established in competition with present farmer firms, unless after every possible effort and concession has been made to secure this harmony and co-operation."

In view of the friction which has developed between these two organizations in various sections this resolution is indicative of the desire of the farm bureau to co-operate. It also definitely establishes the fact stated in the farm bureau platform that it is not a marketing agency in itself, confining its efforts to assisting in creating such agencies and urging its members to utilize the facilities of existing co-operative business organizations.

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Keep an Eye on Markets.

Farmers and livestock producers will profit by watching market conditions constantly. A western sheep speculator is said to have made a million and a half dollars recently, recovering a fortune lost during the deflation period. Other speculative feeders have made large profits through being able to pick up feeders here and there from owners who were uninformed as to the probable conditions in sheep and lamb marketing.

The speculator profits through knowing more of market prices and market conditions than those with whom he deals. The producer who visits the central market but once, or at best only a few times a year, is at a disadvantage in appraising his own stock by examining market quotations when he is about ready to sell. He needs to study market news constantly in order to get the "feel" of the market and learn to read between the lines. The marketing service we are now supplying to Western Farm Life readers is designed to meet this need and we hope our readers will form the habit of following these articles closely as they appear in succeeding issues.

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Purebred Sire Contest.

Swatting the scrub sire in El Paso county, Colorado, is to be the order of the day in the year ahead. A committee of the county farm bureau at a recent meeting made definite plans to encourage the passing of the scrub. It is in the nature of a contest in which a silver trophy cup will be awarded to the community making the best showing in replacing scrubs with purebreds. The contest will be conducted on a point and percentage basis in such a manner that the large communities will have no advantages over the smaller communities. The committee in charge is as follows: O. F. Dickson, Calhan, chairman; James J. Gauld of Myron Stratton Home farms; Scotty Duncan, Yoder, and J. C. Hale, county agent. The communities desiring to enter the contest are asked to notify a member of this committee.

This is a most commendable enterprise in livestock improvement. Nothing is doing so much to retard livestock improvement as the continued use of inferior sires. There is no cheaper nor surer way to bring about rapid improvement than the use of good purebred sires. It should be remembered in this connection that there are purebred scrubs as well as those of the ordinary variety. The mere possession of a recorded pedigree does not necessarily make the animal valuable as a herd header.

News of the Farm Bureaus

Howard Summarizes Agricultural Conference.—"The national agricultural conference will go down in history as the fartherest reaching conference of farmers ever held," said J. R. Howard, president of the American Farm Bureau Federation, in commenting on the results of the Washington meeting. "The topmost feature, of course, was the address of the President with its statements as to the administration's attitude toward agriculture. Probably no chief executive of the nation has ever indicated so deep and intelligent an interest in the farmers' affairs. The President recognized the bad state of agriculture at the present time, stressed the outstanding importance of agriculture in our national life, showed that the farmer must have a credit system adapted to his needs, asserted that lasting improvement is to come only from the development of co-operative marketing, favored a scientific limitation of production and pointed out the dignity of the profession.

"Accepting the President's challenge, the American Farm Bureau Federation will attempt to organize all the farmers of the country and unite them into strong commodity marketing associations which will improve distribution of food to the lasting benefit of both consumer and producer. We want to bring the eater and the grower together. The co-operative marketing movement fostered by the American Farm Bureau Federation is a protest expressed in action against excessive marketing margins and distribution costs. It is no new thing. It has been carried on successfully in Europe for hundreds of years."

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Report on Corn Relief Work.—A detailed report of the gathering, shipping, processing and final disposition of the 413 cars of corn donated by farmers of the United States for European relief has been issued by A. R. Simpson, office manager of the Chicago office of the American Farm Bureau Federation and in charge of the corn relief campaign. His report shows that the biggest thing of its kind ever attempted was carried through to a successful conclusion due to the efforts of the American Farm Bureau Federation as put forth by its president, J. R. Howard, his assistant, Carl Vrooman, and Mr. Simpson, in co-operation with the other agencies involved. Four cars of corn were contributed by Colorado farmers, one from Burlington, one from Kit Carson, one from Wray and one from Yuma.

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Plans to Sign Million More Members.—The organization publicity-conference, held in the general offices of the American Farm Bureau Federation in Chicago, February 6 to 9, was attended by thirty-two men, all directly interested in the success of the plan of the department of information for intensive education in farm ideals and purposes in advance of solicitations for membership. The plan as submitted by the American Farm Bureau Federation organization and information departments was endorsed by the state farm bureau delegates. After approving the plan, the state organization and publicity directors set to work with the American Farm Bureau Federation representatives and helped construct the educational plan in every detail. The new plan books will be ready by March 1. The farm bureau is avowedly out for a "million more members by 1923."

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Morgan County Bureau Holds Annual Meeting.—Although now without a county agent, farm bureau members of Morgan county recently held a rousing meeting well attended by representative farmers of the county. Keen interest was shown in the farm bureau work despite the fact that for a year there has been no agent to carry out the program laid down. J. M. Rodgers, Colorado national American Farm Bureau representative, spoke on the "Farm Bloc" and the "Farm Bureau." A lively discussion on the present business depression was led by E. J. Leonard for the farmers, and H. C. Geisie, manager of the sugar factory, for the business men. It was agreed to start a campaign for a 100 per cent membership. Resolutions were passed approving the activities of the American Farm Bureau Federation, the Colorado State Farm Bureau, and recommending that the Morgan county organization appropriate $50 for the work of the state organization. It was significant that among the resolutions was one urging farm bureau officers to co-operate with the Farmers' Union, commercial clubs and other organizations on all matters that will result in public good.

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Against American Valuation Plan.—The farmers represented by the A. F. B. F. before the Senate finance committee declared themselves against the American Valuation Plan as written, and favored giving the President or the tariff commission powers to adjust tariff rates within limits fixed by Congress, asked that a fair tariff be placed on certain commodities, and objected to excessive rates on manufactured products. Because the economic relations between nations at this time are subject to changes that cannot be anticipated, the Farm Bureau suggests the need of a means of tariff adjustment which will operate quickly and recommends that the powers of the President or tariff commission be extended so that emergencies may be met through the rapid adjustment of tariffs within limits fixed by Congress. "The Farm Bureau claims that American valuation involves radical changes in the system of collecting customs which would require entire re-organization of the revenue service. "The first effect of this system," says the Federation, "would be to increase the amount of duty to be paid, since it is calculated upon the wholesale market price which includes distribution costs in addition to production costs. When goods are imported that have not been sold here an American price must be named by the custom officials which in effect obligates them to perform a price-fixing duty."

From the Nation's Capital

FARMERS' CO-OPERATIVE MARKETING BILL PASSED BY CONGRESS AFTER SEVERAL YEARS.

E. E. Reynolds.

SEVERAL bills of particular interest to farmers have been before Congress the past month. The farmers' co-operative marketing bill passed both houses with little opposition, after having been before Congress in one form or another for several years. The only change in the bill coming from the Senate and sent to the White House for the President's signature, is an amendment which provides that co-operative marketing associations con only deal in an amount of such products of nonmembers equal to the amount of products dealt in for members of the association. This amendment, it was alleged by its sponsors, makes it impossible for a group of individuals within an organization resolving themselves into a closed corporation and taking over the buying and selling business of the organization for their own profit.

The measure retains the provisions which relieve the co-operative associations from the application of the anti-trust laws, placing the authority to determine when unfair practices have been committed with the Secretary of Agriculture, and removing the uncertainties of a legal nature that have menaced the attempts of farmers to co-operate in marketing in the past.

The enactment of this law at this time is regarded as a distinct victory for the agricultural bloc, and a practical demonstration of the power of organized farmers backed by an active group in the Senate and House, standing unitedly for the farmers' demands. It is regarded by the farm organizations as one of the most important acts of legislation passed by Congress in a long time.

A letter congratulating Representative A. J. Volstead of Minnesota for his "persistence and loyalty to the interests of the farmers" in the efficient fight he mdae for this legislation, signed by Milo D. Campbell, president National Milk Producers' Association; John D. Miller, chairman executive committee National Board of Farm Organizations; T. C. Atkeson, National Grange representative, and Gray Silver of the American Farm Bureau Federation, said: "We consider this measure a forward step of the very highest value to agriculture, and we hope now to effect by self-help of the character permitted by this bill a fairer marketing condition for agricultural products."

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Hearings on Price Fixing Bill.—Hearings on the Ladd-Sinclair price fixing bill were in progress before the House and Senate committees of agriculture much of the time last month. This bill would provide for a commission of government officials who would establish minimum prices for wheat, corn, wool, and several other farm products.

Several leaders of organized labor appeared before the committee in advocacy of the price fixing bill. "The workingmen are pretty well convinced," they said, "that it is not the farmer but the middleman and the profiteering wholesaler and retailer who are responsible for high costs of living. Relief ought to come to the farmer and the workingmen are not going to complain of the high prices of farm products if they are convinced that it is not the fault of the farmer, but of the profiteers that handle the farmers' products."

T. C. Atkeson, Washington representative of the National Grange, said he stood unqualifiedly on the National Grange statement that "in war time, price fixing may have been necessary; in peace times, the Grange regards price fixing as unjustifiable and indefensible." He thought that price fixing on farm products might temporarily benefit the farmers, but in the end it would prove disastrous. If the price on a staple product like wheat is a profitable one it will increase the surplus, and if too low it will prove disappointing. As only 25 per cent of the population are food producers, it will mean that the consumers who are in a large majority, and who are interested in keeping prices of farm products as low as possible, will be able to fix the price.

"No one can occupy the place I have with the Federal Trade Commission," Victor Murdock of Kansas told the committee, "without looking with suspicion on governmental price fixing."

A number of representatives of the Non-Partisan League, Farmers' National Council and other farm organizations of a similar character have spoken in favor of the price fixing bills, and senators and congressmen from the western grain belt and mountain states are receiving letters and petitions from many of their constituents asking for a revival of the United States Grain Corporation, in connection with the price stabilization program, indicating considerable sentiment in favor of government price fixing in the western states.

Hearing on Bill Providing Federal Built Warehouses.—Hearings are being held before the House committee of agriculture on a bill introduced by Representative Swank of Oklahoma, providing that the Federal government shall build warehouses in conjunction with the states and in co-operation with legally organized farmers' co-operative associations, for the storage of farm products not perishable, for the insurance of such products while in storage, for government loans on warehouse receipts. Under this bill, when a state or farmers' co-operative association appropriates money to build a warehouse, then the Federal government will furnish a like amount to assist in constructing or otherwise acquiring such warehouse, and the Secretary of Agriculture will have joint control of the warehouse, which is to be bonded under the government warehouse system.

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Bill to Provide for Growing Crop Insurance.—Congressman King of Illinois has introduced a bill in the House calling for the establishment of a farm risk insurance bureau, which would insure growing crops of non-perishable products against loss or damage resulting from adverse weather conditions. A resolution introduced by Senator Sheppard of Texas, directs the committee on agriculture to investigate the practicability and desirability of a bureau of crop insurance, to be operated by the Federal government. Hearings on this resolution will begin at an early date.

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Would Establish Motor Mail Routes.—A bill introduced by Representative Steenerson of Minnesota, authorizes the postmaster general to establish motor vehicle rural routes of not less than thirty-six miles nor of more than seventy-five miles in length.

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Filled Milk Legislation.—Since the enactment of the farmers' collective marketing bill the dairy interests are centering their attention upon filled milk legislation. The Voigt bill would legislate filled milk out of existence by denying shipment of the "counterfeit" milk in interstate commerce. The Fordney bill undertakes to solve the problem by a tax on filled milk. The Voigt bill is now on the calendar of the House, and C. W. Holman, secretary of the National Milk Producers' Federation, predicts that it will pass the House at a nearly date.

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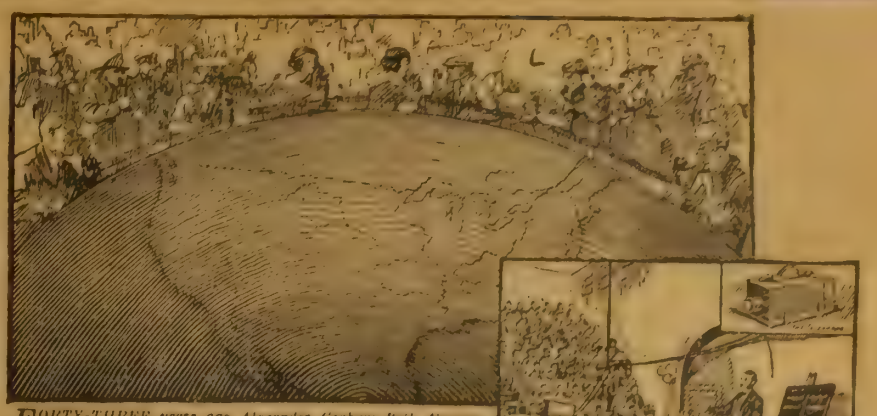
The Truth-in-Fabric Bill. — Such strong pressure has been brought to bear in the House for action on the Truth-in-Fabric bill, H. R. 64, by the American Farm Bureau Federation and other farm organizations, that the agricultural bloc and others through Representative William C. Ramseyer of Iowa recently introduced a resolution providing that the House of Representatives resolve itself into a committee of the whole, for the purpose of considering the bill, and that the debate be limited to ten hours, one-half favoring and one-half opposing. Upon the conclusion of the consideration of the bill it shall be reported to the House with

(Turn to Page 17.)



FORTY-THREE years ago Alexander Graham Bell, the inventor of the telephone, wrote this inspired forecast: "It is conceivable that cables of telephone wires could be laid underground or suspended overhead, communicating by branch wires with private dwellings, country houses, shops, manufactories, etc., and a man in one part of the country may communicate by word of mouth with another in a distant place." At the right, an old print of Bell lecturing on telephony, 1877.

Foresight

More than forty years ago, when the telephone was still in its experimental stage, with but a few wires strung around Boston, the men back of the undertaking foresaw a universal system of communication that would have its influence upon all phases of our social and commercial life.

They had a plan of organization capable of expansion to meet the growth they foresaw; and their wisdom is borne out by the fact that that plan which they established when telephones were numbered by dozens is efficient now when telephones are numbered by millions.

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Farmers' Service Bureau

Readers are invited to make generous use of this department. Questions regarding any branch of farming, livestock production, animal diseases, legal matters pertaining to the farm, homestead inquiries and the like cheerfully and promptly answered by letter and through the magazine. Address all communications to SERVICE BUREAU, WESTERN FARM LIFE, Denver, Colorado.

Deer Shed Horns Annually.

Do deer shed their horns every year?—J. T. C., Crowley county, Colo.

All species of deer shed their horns annually. Perhaps the pair you have were removed from a deer which had been killed.—G. C. W.

Cannot Garnishee Mail Man's Wages.

Can a man's wages be garnisheed? How do you go about it? He is in the mail service.—

The wages may not be reached by garnishee.—Hamlet J. Barry, 726 Equitable Bldg., Denver.

Cholera Germs Dead After Two Years.

When can I raise hogs on some land which had been infected with cholera? I want to raise some for our own use, but don't care to buy pigs and then have them die.—H. G., Idaho.

There is absolutely no danger after two years if the hog yards were properly cleaned up at the time of the epidemic.—A. T. S.

No Cure for Leaky Teats.

I have a cow that loses her milk bad. What can I do to stop it?—A. E. D., Utah.

There is no practical remedy for a leaky cow. The end of the teat can be closed after each milking by applying collodion, which can be obtained at the drug store. This is sometimes done by dairymen showing heavy milking cows inclined to leak their milk in the show ring, but it is not practical under ordinary conditions.—G. C. W.

Collateral Sold to Satisfy Note.

If A borrows $500 on note of B, giving B a $1,000 note escured by a mortgage on land as collateral security, and A fails to pay his note when due, does A lose his equity in collateral note or must collateral note be advertised and sold, giving A chance to protect his equity?—Subscriber, Colo.

The collateral should be sold to satisfy the $500 note, and if sold for more than $500 and charges including interest, the overplus belongs to A. There is, however, no right of redemption in personal property, such as this is.—Hamlet J. Barry, 726 Equitable Bldg., Denver.

Molasses Beet Pulp for Milk Cows.

Can you advise me what amount by weight in the dry state is the maximum of dried molasses beet pulp a head for milking heifers. Does it have a deleterious effect on the teeth of cows?—J. K., Morgan county, Colo.

You do not state just what you are feeding your milking heifers in addition to the pulp, but I assume that you are using this mainly for succulence. It is, of course, a distinctly carbonaceous feed and must not be used as a substitute for protein concentrates. Experienced dairymen seldom feed more than six pounds of this dried pulp daily. I never heard that it had any deleterious effect on the teeth of cows if fed in this manner.—G. C. W.

What Kind of Alfalfa.

Which kind of alfalfa, the common or the Grimm, yields the most tons of hay per acre?—J. O. C., Lincoln county, Colo.

It has generally been agreed that pure Grimm alfalfa is better for most Colorado conditions than the common alfalfa. There may be localities in which the common alfalfa would outyield the Grimm alfalfa. The Grimm is more hardy and therefore holds a stand better than the common variety. Under the conditions you have in mind I would not want to say which of the two varieties might yield the most tons an acre in a given year.—G. C. W.

Smutty Grain or Straw Not Dangerous.

I am feeding smutty wheat straw and hay to my cattle. A load of each daily. I have been told that a smut in wheat straw will cause the cow to abort in the spring.—L. L., Adams county, Colo.

It seems to have been definitely determined that the feeding of smutty grain will not cause abortion in cows. However, it may be quite different with ergot which infest many of our native grasses, and is especially abundant in wild rye. Corn smut has been fed to pregnant cows in large quantities, extending over a long period, without disastrous consequences.

No doubt abortion is caused in nearly all cases by infection. Contagious abortion is very prevalent, both in the dairy herds and among range cattle. This no doubt is what is causing the loss of your calves.

Under separate cover I am sending to you a bulletin on the abortion disease.—G. H. G

War Finance Money.

Where can I get a loan from the War Finance Corporation to finance me for a year or two in the raising of Poland China hogs?—E. T. C., Morgan County, Colo.

Loans by the War Finance Corporation are made through the banks, consequently you should apply to your local bank first. If they are unable to serve you in the matter, take it up with C. Lee Wood, Secretary, War Finance Corporation, 604 U. S. National Bank Bldg., Denver.

Can Garnishee Crops.

A and B represent man and wife, who borrow $1,000 from C and this note is signed by A and B with no security. The note is payable April 1, 1920, 6 per cent interest, and has never been renewed, but interest paid up until April 1, 1921. A and B have first and second mortgage on farm for all it is worth today and first mortgage on all livestock and implements. Can C garnishee A and B's cream checks and all selling crops? How long is a note good after maturity if not paid or renewed?—A. M., Kiowa County, Colo.

The note does not outlaw until six years after its maturity. C may garnishee anything he can reach if he uses the proper method to do so, and that would include the cream checks and the crop.—Hamlet J. Barry, 726 Equitable Bldg., Denver.

Custer's Last Stand.

When and where did Custer make his last stand.—C. J. D. H., Otero county, Colo.

Lieutenant Colonel George Armstrong Custer was sent to the Dakota territory in 1873 against the Sioux Indians. In 1876 the Sioux and their allies were gathered in force at the junction of the Little and Big Horn rivers in what is now Montana. On the night of June 24, 1876, Custer was informed of the presence of a small force of Indians, but this information was erroneous. The Indians were gathered in full force. On the following day Custer divided his regiment into three divisions, intending to surround what he supposed was a small number of redskins. The Indians attacked in full force and Custer with 264 men, comprising the center division, found himself surrounded. Every man was slain after a bitter fight.—A. T. S.

Horse Has Fistula.

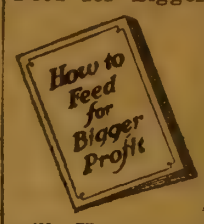
I have a horse with fistula. How can this be cured?—L. L., Adams county, Colo.

First, a drainage opening must be made at the very lowest point of the wound, so that all matter in the wound will be promptly discharged; second, all dead bone, ligament, etc., must be removed from the bottom of the wound before healing will take place. In our opinion, these results can be obtained best by a surgical operation. Success is sometimes reported from packing the wound with ordinary quicklime, previously smearing the side of the body with vaseline so that the lime will not eat off the hair. Others report good results from the use of copper sulphate or blue vitriol, corrosive sublimate, etc. The foregoing drugs all have about the same action, that is, they eat away the diseased tissues, but unfortunately they also eat away the healthy tissues and therefore the use of the knife is preferable, because its action can be controlled. After the fistulous withers has been properly operated upon the wound should be treated daily thereafter with antiseptic washes, such as a 2 per cent water solution of carbolic acid. Previous to using the antiseptic washes, it is well to smear the shoulder with vaseline, which prevents the antiseptic wash from eating off the hair. Fistulous withers cannot be treated without leaving a scar or blemish as an after-effect. The size of the scar depends upon the severity of the disease. If a good deal of dead tissue has to be removed there will be a corresponding depression and scar at the place of the removal.—G. H. G

Free Book on Feeding

New Free Book Tells How to Save Feed—Market Earlier and Make Bigger Profits.

Farmers everywhere will be interested in a new 24-page book which gives the experience of hundreds of feeders who are raising livestock at good profits regardless of market conditions. This book is entitled "How to Feed for Bigger Profits" and covers every angle of feeding in a clear and easy to understand manner.



Besides valuable hints on how to save feed, this book tells How to feed for market, How to make dairy cows give more milk, How to get better prices for livestock, How to prevent diseases and common disorders which cause so much loss each year. No matter what kind of stock you are raising, this valuable book will be a real guide to better success and bigger profits.

Take advantage of the simple and practical methods that are bringing success to feeders in all parts of the country. The highest authorities on livestock have contributed to this useful book. Simply send your name and address and this Free Book will be sent you by return mail. No need to guess; know the facts. This book will save you time, money and worry. Send at once—Dept. 2106, Home Welfare Dept., The Carey Salt Company, Hutchinson, Kans.

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Silage From Cull Potatoes.

You have heard a lot about potato silage before. So have I, but when the papers were full of it several years ago, it was purely theoretical. The food experts said: "Do it," but based their advice on practices in Europe, or other far-away places.

I always took the advice half-heartedly, for I never had seen potato silage, nor heard first-hand of anybody who had tried the concoction. When I learned that H. G. Larsen, Minnesota, was making silage out of cull potatoes and feeding the silage with good results, I decided to find out all about it. This is the story I got:

"Some potatoes are small, some scabby, some damaged at digging time. Sometimes there is a surplus of old potatoes in the spring The potatoes that are unfit for market can be turned into one of the very best feeds for hogs and cattle by making silage out of them. I know, and speak from experience.

"This isn't a new invention nor my own recipe; it has been in use in Denmark for years. The prize bacon which brought a fancy price on the British market for years, was made largely from potato silage. So, I decided that what would make prize bacon for a Dane would make just as good bacon for an American. I tried the experiment. We had a surplus of old potatoes in the spring, and no market for them."

The outfit used by Mr. Larsen was simple—root cutter, six vinegar or syrup barrels, and a sack of cornmeal. Cornmeal is put into a tub and enough water is added to make it ferment. This is done several days before the silage is made. This serves as a starter for the potatoes, for they will not sour alone. Two to five per cent of cornmeal is added. Barrels are made ready by cleaning, potatoes are scrubbed to remove dirt, rotten potatoes are removed, tubers are run through the cutter and a bushel of ground spuds is put in the bottom of a barrel, a few handfuls of fermented meal are added, then more spuds, more meal, and so on till the barrel is filled. Pack firmly and put a heavy piece of wood on top to weight the silage down. Add no water or salt. As the silage settles, put chaff or straw over the top to keep out air. In three weeks, if the barrels are not left in a cold place, the silage is ready to use.

"Keep the barrels covered while feeding" is Larsen's precaution, "otherwise the silage will spoil. When a barrel is empty, scrub it and make another batch. Use only unmarketable spuds; the market will take care of the first class ones. Culls are too valuable to market when you have hogs or cows to feed them to.

"Of course, potato silage has no hocus-pocus about it that will make a dry cow give milk, but here is what it did for us: One of our cows that was due to go dry in the winter kept right on giving milk, and furnished enough for three families.

The use of barrels makes it possible for farmers who can't try this on a large scale, to have a silo, or half dozen of them, inside the barn.—E. A. Kirkpatrick, in Hoard's Dairyman.

Sudan Crop Worth $10,000,000.

Thousands of farmers are using Sudan grass successfully as a summer pasture. For this purpose there are few crops that give better returns and serve so well to supplement the permanent pastures and the feed lot. It is becoming an important hay crop in some sections of the great plains area, withstanding drouth well. While it is particularly adapted to the warmer sections of the temperate zone it has been grown with success as far north as southern Alberta in Canada. The United States Department of Agriculture places the total value of the crop in the United States for the year 1918 at $10,000,000. It originated in this country from an 8-ounce package of seed introduced from Africa through the efforts of C. V. Piper of the United States Department of Agriculture in 1909. Its popularity is said to be greater here than in its native country. It is so admirably adapted for use as an emergency hay crop that it is rapidly supplanting millet in many states.

Freshening Season Important.

Cows that freshen in the fall and early winter will produce the most milk and butterfat and bring in the greatest income over cost of feed. Many individual dairymen have come to this conclusion, but an analysis of the figures obtained from many cow testing associations all over the United States prove that in most sections greater and more profitable production results from fall and early winter freshening.

$200 Cut in Titan Price

Now $700 f. o. b. Chicago

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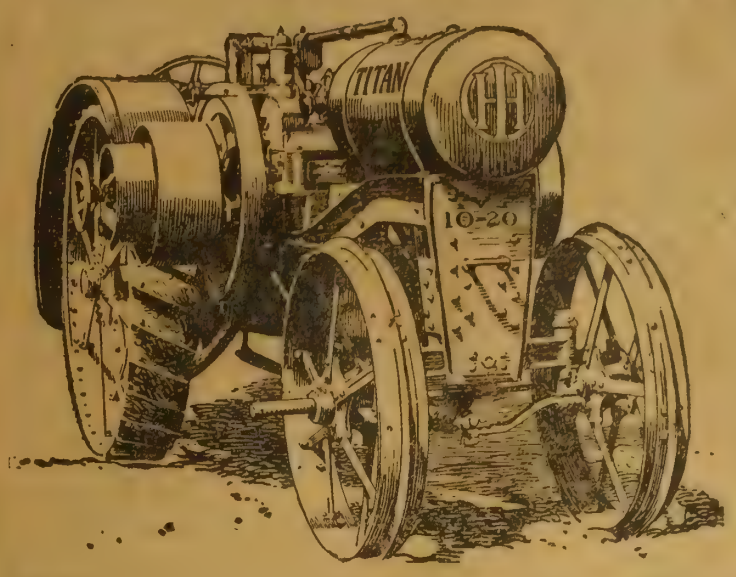

Harvester Company's Exceptional Offer

Effective Feb. 3, to May 1, 1922

The Harvester Company makes this special offer to apply on all new International 8-16 and Titan 10-20 tractors purchased by its dealers on 1922 account: Each farmer purchasing one of these Titan tractors, for delivery on or before May 1 next, will be given by the Company ***absolutely free,*** f. o. b. Chicago, a 3-furrow P&O plow. On the same terms, each farmer who purchases an International 8-16 will be given a 2-furrow P & O plow.

THE Titan is not a stripped tractor, pared down to make a price, but complete with all essential equipment—***friction clutch pulley, fenders, platform, throttle governor, adjustable drawbar, angle lugs, brakes.*** This equipment, worth more than $100 and necessary on any tractor to make it serviceable and safe, is included in the new $700 price. ***No extras to buy.***

The Titan is a real 3-plow tractor and has belt power in proportion. It has enormous reserve power. Its 3-plow capacity cuts the labor cost on every field operation—a big item in farm operating expense. Titan is famous for long life. It has proved in eight years of use that it outlasts two or three small inferior tractors. Does best work on cheap kerosene. Low repair and upkeep expense. Always on the job.

$230 Cut in International 8-16

The International 8-16 tractor now sells for $670, f. o. b. Chicago. Until May 1, 1922, each purchaser of an International 8-16 covered by the Special Offer will be given a P & O 2-furrow plow free. If the purchaser of either tractor now owns a suitable plow we will substitute a tractor disk harrow.

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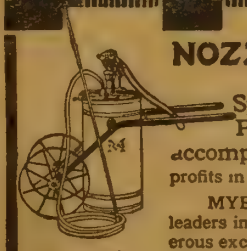

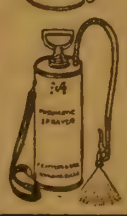

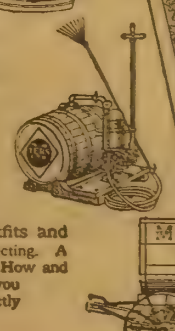

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A Bean Shortage Looms Ahead

SUPPLIES FAR BELOW HOME CONSUMPTION.

IF statistics count for anything in the making of markets, owners of beans are in a strong position and consumers will find that beans have been removed from the bargain counter for the rest of the crop year. Both the 1920 and 1921 crops were small, smaller than any others since the yield has been estimated by the Department of Agriculture. The following table shows the production record for a series of years:

	Bushels.
1921	9,118,000
1920	9,077,000
1919	13,349,000
1918	17,397,000
1917	16,045,000
1916	10,715,000
1915	11,321,000
1914	11,585,000
1909 (Census)	11,145,000

The consuming public in the United States is probably using fewer beans than it has at times in the past, as a lot o the doughboys ate enough of them during the war to last them for a lifetime, but in spite of any such reduction, two small crops in succession promise to make a rather tense situation before the 1922 crop comes on the market.

Exports Exceed Imports.

Besides the reduction in the crop yield, a significant change has taken place in our foreign trade in beans. Exports in the calendar year 1921 were 1,409,703 bushels. This is only 365,000 bushels less than in 1920. Average exports for the four years, 1917 to 1921, were 2,424,000 bushels. Imports during 1921, on the other hand, were only 274,068 bushels, compared with a four-year average of 3,905,000 bushels.

The foreign trade has changed from an average import balance of 1,481,000 bushels during the four years as shown by the figures above to an export balance of 1,235,645 bushels in 1921. When this change in the export trade is taken into account, the supply of beans for domestic consumption during the present year appears to be but little more than 50 per cent of the quantity actually consumed in this country on the average during the last four years.

Although these figures show that the bean bag may become quite lank before next October if only home needs are taken into account, some beans are still being sold for export, the American relief administration having been a recent buyer for shipment to Russia.

Price Conditions Improve.

Prices remained low throughout the first half of 1921, due to the general business depression so that imports were not attracted. The emergency tariff duty of 2 cents a bushel amounted to practically an embargo as long as prices remained upon a low level. The foreign market still is about 1 cent above an import basis.

The bean market made little or no response to the situation during the first months after harvest, as producers sold freely in spite of a small crop and wholesalers and retailers were disposed to carry light stocks at least until after inventory taking in January. Since that time a brisk trade has been done. Numerous rush orders suggest that the beans are wanted to supply an urgent consumptive trade and not for storage.

Trade estimates indicate that stocks in the producing sections in Michigan, Colorado and New Mexico, are only about 20 per cent of the crop. Stocks in California also are very much smaller than at this time last year.

During the war the demand for pork and beans brought high prices for red kidney beans and stimulated the production of them at the expense of the white sorts. The margin in prices between the two has narrowed a great deal in the last few months, but this readjustment probably is not far from completion.

Bean Production Shifting Westward.

Six states, Michigan, New York, Colorado, California, New Mexico and Arizona have been the chief bean producers until the last few years, when Idaho began coming into prominence. In general, production seems to be shifting westward because of smaller losses from anthracnose than are suffered in the east.

The demand for beans usually sags with the coming of hot weather. In the season of the year when beans are likely to become scarce because of the lapse of time since harvest, purchases are apt to decrease. Nevertheless, prices have reached high points during summer months as an average of a ten-year period on the basis of prices paid to producers as compiled by the U. S. Department of Agriculture. Corresponding prices for 1921 show a different behavior as a result of the business depression, having been low during the summer period. April was the low month of the year, while the high market was reached in September.

When the crop is small, such as appears to be the case this year, the seasonal advance in the summer is likely to be much more pronounced and extend over a longer period of time than when the supply is abundant.

James Painter's Good Work.

James L. C. Painter, a member of the firm of John E. Painter & Sons, of Roggen, Colo., brought honor to both himself and to the state of Colorado by his masterly work as one of the beef cattle judges at the recent International Livestock Exposition at Chicago. Following is part of a letter which he received from the management of the International and which is self-explanatory:

Dear Mr. Painter:—The International directors selected you as a judge because in looking over the available material you, in their opinion, measured up to the high standard fixed by this educational institution. The superior skill and the painstaking care you exercised in placing the awards at the 1921 exposition not only convinced them that no mistake had been made in making this selection, but your splendid service also proved a source of much gratification to the International management. You have reason to feel proud of your recent work, which more firmly established your position as one of this country's expert judges of beef cattle. Kindly accept our sincere appreciation for a task well rendered. Hoping that the new year will bring you good health, much happiness and greatly increased prosperity, I am, sincerely yours, R. H. Heade, Union Stock Yards, Chicago, Ill.

Mr. Painter has had wonderful experience in his chosen profession. His father is one of the best known Hereford breeders in the west and the young man has had "free range" in his experience with beef cattle practically all his life. He graduated from the Colorado School of Agriculture, the preparatory school at the Agricultural College in 1912.

Market Outlook for Farm and Ranch Products.

(Continued from Page 5.)

over stock cattle is likely during the spring, but it is doubtful if values will sag much lower at any time in the next four months, and the general trend is likely to be upward until the spring demand is satisfied.

Advance Does Not Attract Hogs.

In spite of the advance in hog prices to $10.40 at Chicago, receipts show no material increase. Evidence is growing that the supply remaining to be marketed is not excessive. Since the first of February receipts at seven leading markets have run nearly 20 per cent below the average for the corresponding period in recent years. Prices have reached the highest level in more than six months and the market is slightly top-heavy, but until supply enlarges sufficiently to take the advantage in buyers' hands, present prices will be maintained.

Besides the movement into large packing centers, hogs have been disappearing into consumptive channels at an unusually rapid rate in other ways. Shipments direct to smaller packing points and to the western coast as well as to the east from concentration points in the hog belt have been unusually large because of a desire to avoid high freight rates. In the middle west, also, the slaughter of hogs on farms for sale locally has been on an exceptional scale.

Last summer and fall receipts of old sows at the leading markets reached the largest volume and continued for the longest time in the memory of the trade. Most of the arrivals at present are barrows. Undoubtedly large numbers of gilts are being retained simply to restore breeding herds to normal size. In addition, many herds are being increased above normal as a result of high prices now prevalent.

Lamb Scarcity Continues.

Although receipts of lamb at the seven leading markets in the last ten days have been only about 12 per cent less than in the corresponding period of 1921, the supply has been considerably below the requirements of the trade and

prices have advanced almost without interruption.

Wheat Supply and Demand Balance.

The world's statistical position so far as wheat is concerned, continues to grow tighter. The official Argentine crop estimate has been reduced to 155,000,000 bushels, or 15,000,000 bushels less than last year, and 16,000,000 bushels less than the five-year average. This change indicates an exportable surplus of around 100,000,000 bushels old and new crop from that country. With this revision, world's surpluses for the crop year 1921-1922 are practically balanced by probable requirements of importing countries. There was a carry-over of about 100,000,000 bushels above normal in all exporting countries on July 1, 1921. Since this is to be consumed in addition to the crop yield of 1921, it is evident that larger production in the next year will be necessary. This makes the southwestern drouth an extremely serious matter.

Millers in the United Kingdom have bought freely of Argentine and Australian wheat and are said to have contracted all of the grain due to arrive at United Kingdom ports during the next five weeks. Argentine and Liverpool prices have advanced faster than those in this country, with Liverpool nearly 25 cents higher than at the beginning of the month. European buyers permitted their reserves of wheat to become low, but recently have become concerned over the prospect of scarcity later on and the recent scramble has resulted. Both Argentine and Australia are shipping heavily, with Argentine clearances exceeding 5,000,000 bushels a week Receipts from the Argentine interior have been rather liberal, but so much wheat was contracted for export to be shipped during February and March that exporters have found it difficult to fill their sales.

Southwestern Drouth Unbroken.

It is still too early to estimate the severity of damage from dry weather in the Southwest, but there has been but little relief thus far and every day without rain or snow heightens the critical condition of the crop. Some wild estimates of acreage abandonment as high as 40 per cent in Kansas have been made, but there is still time for spring rains to repair part of the damage. Growing weather will soon be due in Oklahoma and southern Kansas, which will reveal the situation.

With a bullish statistical situation and prospects of a small winter wheat crop, the market promises to be influenced very strongly by the character of the weather in the Southwest, but even with the most favorable conditions it is doubtful if the highest prices of the season have been seen.

In spite of the crop scare in Kansas, farmers have been selling wheat rather freely, apparently in an effort to discharge financial obligations. Higher prices are helping to maintain the movement from the country, but have not increased it greatly and it is not believed that the present rate of arrivals at terminals can continue long.

Corn Highest in Months.

Although the quantity of corn arriving at terminal markets is far above the average for this season of the year, the advance in wheat prices coupled with a broad demand for corn, has advanced corn prices to the highest level in several months. The bulge has induced heavy selling on the part of producers and the present rate of movement may continue for two or three weeks longer. Exporters are buying briskly at the seaboard and boat room cannot be obtained fast enough to keep eastern ports cleared so that a partial embargo on shipments to Baltimore has been necessary on account of large holdings on track at that point.

Cash Grain Markets.

The range of cash grain prices follows:

Kansas City—Wheat: No. 3 red, $1.23@1.32; No. 2 hard, $1.21@1.47; No. 3, $1.20@1.47; No. 4, $1.15@1.40. Corn—No. 2 mixed, 50@54c; No. 2 yellow, 52½@55c; No. 2 white, 50½@54¼c. Oats—No. 2 white, 36½@37¾c.

Omaha—Wheat: No. 2 hard, $1.25@1.33; No. 3, $1.24@1.31. Corn—No. 2 mixed, 47½@50½c; No. 3, 47@50c; No. 2 yellow, 47½@50¾c; No. 3, 48@50½c; No. 2 white, 47¾c@50¾c. Oats No. 3 white, 34½@35¾c; No. 4, 34½@35½c.

Hay Demand Limited.

Except for alfalfa, demand for hay continues disappointing to producers and dealers, although spells of cold weather bring an occasional increase. The supply of poor quality continues excessive. Receipts of hay at Kansas City, the leading distributing market, since the first of the year total only 2,154 cars, compared with 3,287 cars in the same period last year, and 7,786 cars in the same period two years ago. Michigan, Wisconsin and the Dakotas seem to be shorter on forage than other states.

Kansas City—Prairie upland No. 1, $10@11; No. 2, $7@10.50. Alfalfa—Choice, $22@24.50; No. 1, $19@22; No. 3, $11.50@14.50. Straw, $6@7.

Egg Market in Transitional Stage.

The egg market is in a transitional stage as the spring increase in production is showing up in the southern sections, although receipts at the leading markets have not increased as much as they did at this season last year. The preliminary report on cold-storage holdings in the United States on February 1 was 182,000 cases, compared with 43,000 cases on the same date last year and a five-year average of 173,000 cases. The decrease in storage stocks during January was 704,000 cases, compared with a five-year average of 809,000 cases.

Kansas City—Eggs: Firsts, 30c; seconds, 24c. Live poultry—Springers, 21c; heavy hens, 21c; light hens, 19c; roosters, 10c. Ducks, 19c. Geese, 16c. Turkeys, 38c.

Butter Markets Mixed.

Butter markets have presented a mixed appearance recently with eastern cities weak and Chicago disposed to advance. Receipts of fresh butter at New York increased notably with 1,300 boxes of Australian butter received by rail from the west, and about 5,000 boxes more of Argentine butter due to arrive. Reports of a lighter make have not been borne out by market receipts.

Potato Supply Ample.

According to a report just made public by the Bureau of Markets, stocks of potatoes on hand on January 1 were 144,042,000 bushels. The final estimate upon the 1921 crop was 347,000,000 bushels. Of the holdings 20,434,000 were in Maine, 14,514,000 in New York, 13,752,000 in Wisconsin, 12,811,000 in Michigan, 11,698,000 in Minnesota and 6,570,000 in Colorado. The supply looks ample for the rest of the crop year. New potatoes are already being seeded in extreme southern states. Most markets have been weak recently. Northern round whites f. o. b. shipping points are quoted at $1.55 to $1.80. At Colorado shipping points, $1.10 per 100 pounds is being paid to growers for sacked Rurals in wagonloads. Northern whites are bringing $1.65 to $1.90 in Chicago and $1.90 to $2.15 in most other consuming markets.

Recent Range of Livestock Prices at Our Principal Markets.

Cattle—	Denver.	Kansas City.	Omaha.
Choice and prime heavy steers (1100 lb. up)	.....	$8.15@ 9.15	$7.75@ 8.75
Good heavy steers	$6.75@ 7.25	7.25@ 8.15	7.00@ 7.75
Medium heavy steers	6.00@ 6.75	6.60@ 7.30	6.25@ 7.00
Common heavy steers	5.00@ 6.00	5.60@ 6.65	5.50@ 6.50
Choice and prime light steers (1100 lb. down)	.....	8.10@ 9.00	7.75@ 8.75
Good light steers	6.50@ 7.25	7.00@ 8.10	7.00@ 7.75
Medium light steers	5.75@ 6.65	6.40@ 7.00	6.25@ 7.00
Common light steers	4.75@ 5.75	5.40@ 6.40	5.50@ 6.50
Common to choice butcher heifers	4.00@ 6.90	4.00@ 7.00	4.00@ 7.00
Common to choice butcher cows	3.50@ 5.50	3.75@ 5.60	3.50@ 5.75
Bologna and beef bulls	2.50@ 3.75	3.00@ 5.00	2.75@ 5.00
Canners and cutters, cows and heifers	2.00@ 3.25	2.40@ 3.90	2.50@ 3.75
Canner Steers	2.75@ 3.50	3.00@ 3.75	2.75@ 3.75
Medium to choice light veals	6.00@ 9.50	6.00@10.00	7.00@ 9.50
Common to choice heavy veals	.....	3.75@ 8.00	4.00@ 7.50
Common to choice feeders (1000 lb. up)	4.75@ 7.00	5.25@ 7.25	5.00@ 7.25
Common to choice feeders (750—1000 lb.)	4.50@ 7.00	5.25@ 7.25	5.00@ 7.40
Common to choice stocker steers	.....	4.25@ 7.15	4.75@ 7.50
Common to choice stocker cows and heifers	.....	3.40@ 5.90	3.25@ 5.25
Hogs—			
Top of Market	$ 9.75	$ 10.10	$ 9.95
Bulk of Sales	8.90@ 9.65	8.75@ 9.95	8.90@ 9.80
Heavy (250 lb. up)	8.75@ 9.40	8.50@ 9.80	8.75@ 9.70
Medium (200—250 lbs.)	9.00@ 9.65	9.00@10.00	9.00@ 9.90
Light (150—200 lb.)	9.25@ 9.75	9.00@10.10	9.20@ 9.95
Light lights (130—150 lbs.)	9.00@ 9.50	9.00@10.00	9.25@ 9.90
Smooth packing sows (250 lb. up)	7.00@ 7.50	7.25@ 8.10	7.50@ 9.00
Rough packing sows (200 lbs. up)	6.75@ 7.25	6.75@ 7.25	7.00@ 7.25
Medium to choice pigs (130 lb. down)	8.75@ 9.15	.....	.....
Stock pigs	.....	8.00@ 9.50	9.00@ 9.75

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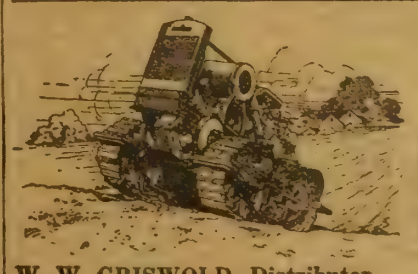

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By Mr. A. Johnson

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The Rural Household

Questions about home problems promptly answered by letter and through the magazine. Letters from women containing helpful suggestions for improvement of rural life are always welcome. Address all communications to Mary G. Collopy, Editor Home Department, Western Farm Life, Denver, Colo.

Women's Club Building Dedicated.

Many of the readers of Western Farm Life have daughters in attendance at the Colorado Agricultural college. Others hope to send their daughters there or to other institutions affording equal opportunities. All women are interested in any achievement which means greater advantages for the women of tomorrow. An important event in this line was the dedication February 10 of the Woman's Club building at Colorado Agricultural college, the first of its kind in the west, at the end of a three-day ceremony and conference of young women from all over the state.

Nearly 250 young women students from the high schools of the state were present, as well as women from adjoining states having to do with educational work. In the official dedication Hon. A. A. Edwards, president of the State Board of Agriculture, spoke of guarding the health and developing the physical strength of the women students, the creation of the proper social life of the institution and comradeship between the young men and young women on the campus, and other advantages which this building would bring. Ex-Governor Ammons spoke of the dream that the farm home should be the best home in the land and that through better training of prospective home-makers this would be brought about.

Others who spoke at the educational conference were Dean S. Antionette Bigelow of the University of Colorado; Dean Anne McKeen Shuler of the University of Denver; Gertrude C. Spaulding of Greeley High school; Miss Small, director of physical education at the University of Colorado, and Miss Rilling, director of physical education at the University of Denver.

During one of the intermissions the inter-fraternity council of the "Aggies" presented the visiting ladies with a large basket of carnations. The young women students studying home economics served a lunch to the delegates and guests. A recreational hour followed by a plunge in the pool of the new building ended the day.

St. Patrick's Lunch.

Maybe you never kissed the blarney stone, maybe the new state of affairs in Ireland doesn't cause any particular excitement in your home, maybe you don't even enjoy singing Irish songs, but there is one instinct common to all: You do like to plan "green" meals for March 17. You like to have a St. Patrick's luncheon, a children's party, or a basket supper at the school house. You enjoy these displays of green; they make you think that Spring is not far away.

The effectiveness of your color scheme does not depend upon your nearness to town. You will want to use what you have at hand. How many have parsley growing in a sunny window? It will help you to make things green. These few suggestions are offered just to induce you to think of others:

Soup—Cream of peas.

Salads—String beans with boiled dressing; peas, with chopped peanuts, or few diced beets; cottage cheese, mixed with nuts and made into balls, roll the balls in finely chopped parsley.

Lettuce—If lettuce can be obtained there are any number of pleasing dishes, as: Head lettuce leaves filled with tuna fish or hard boiled eggs,, shredded lettuce as a foundation for vegetables, egg, or chicken salad. If you have no lettuce, very often you have green cabbage leaves or celery tops for garnish.

Sandwiches — Cheese and parsley layer sandwiches. Use five or six slices of bread. Butter the first and sprinkle with parsley which has been chopped. Place the second slice of bread on this and spread the top of it with soft cheese such as cottage or pimento cheese. The third slice is pressed on top of this and treated as the first slice and so on. When five or six slices have been put together in this way, press them slightly so that they stick firmly together. Then cut down through the slices and you will have your layer sandwiches with lines of green.

The young girls of the family would enjoy making these sandwiches. Since you make a number of sandwiches each time the process is not as long as it might seem.

Desserts—Cinnamon potatoes are a favorite at childrens' parties. Shape the fondant into potatoes and roll these in cinnamon. Use cloves or small seedless raisins for the eyes of the potatoes. Icings and candies colored with green vegetable coloring offer any number of possibilities. A green and white checkerboard effect can be carried out in icing the cake.

Table Decorations—Many homes have an oxalis plant. The leaves of this always remind us of shamrocks. Put a few green fags in the pot around the plant. This makes a pleasing centerpiece.

Other familiar decorations as hats, harps, shamrocks, and pipes, can be used as favors. If clay pipes are used let the children enjoy a soap bubble party afterward.

My Neighbor's Story.

It was a very cold night in November, on the plains of Colorado, that I found myself enjoying all of the physical and mental comfort which an energetic heating stove is capable of giving. Mr. B—, an old soldier, had gone to bed. His wife and I sat talking of the harvest season just passed, of the scarcity of rain, the shortage of competent farm labor, of the long hours of work which she had spent in the field as well as in the home.

As we talked, I wondered at this wonderful women, 59 years of age, and yet so young in enthusiasm and hope. I thought of the large family she had reared so successfully before her second marriage. Financial reverses had come now but she was willing to meet the situation.

Not only in her well kept home was she an inspiration, but in her community as well. Her personal appearance was an influence. The neighbors told me so—the same neighbors who told me they always went home and cleaned their neglected bread boards after a visit in Mrs. B—'s kitchen.

So I asked her to tell me how she planned so well when she worked in the field and in the house.

"You'll smile if I tell you my secret, but I'm going to tell you so you can tell others," she answered.

So I give you now her recipe as she gave it to me that November night:

"When I come in from the field at noon, hungry, hot, and so tired, I walk right straight to the wash stand, hang my straw hat on the nail overhead, wash my hands and face and comb my hair; yes, I comb my hair then and there. Some women think they haven't the time, but this makes time for me. I'm a new woman when my face is clean and my hair is combed. It's like a tonic for me. And Jim never complains, because he knows that dinner has not been delayed by the process."

Our Fashion Service.

All patterns 12 cents each. Address Western Farm Life, Pattern Department, 1518 Court Place, Denver, Colo.

Read This Before Ordering: Patterns ordered through this magazine are mailed promptly from the factory at Brooklyn, N. Y., and arrive in 10 to 12 days from time order reaches Western Farm Life. Be sure to specify size and number of patterns. Write your name and postoffice address plainly to avoid delay. These patterns are handled at cost, as a service to our women readers. The price of 12 cents includes postage.

3801—Guimpe, 3793—Dress. Chic and Charming Design. Here is a very popular variation of the jumper dress and a pretty guimpe to wear with it. As portrayed, wool jersey embroidered in floss was used. The guimpe is of pongee with self frills and hemstitching for trimming. In duvetyn or crepe a trimming of grosgrain ribbon would be pleasing. The guimpe 3801, is cut in sizes 34, 36, 38, 40, 42, 44 and 46 inches bust measure. The dress 3793, is cut in sizes, 34, 86, 38, 40, 42, 44, 46 and 48 inches bust measure. The width at the foot is about 2 yards. This style is good for slender as well as for mature figures. The dress front is cut with fulness beneath the yoke extension of the back. To make this style for a 38-inch size requires 2⅝ yards of 36-inch material, 3⅝ yards of 40-inch material. This illustration calls for TWO separate patterns, 12c each.

3784—Stylish Popular Model.—It is cut in sizes 16, 18 and 20 years. An 18-year size requires 5⅞ yards of 40-inch material. Duvetyn, serge, tricotine, velveteen, mohair and moire, also poplin, linen, silk and crepe weaves are desirable materials for this model. The width of the skirt at the foot is about 2 yards.

One may have this with a short or wrist length sleeve.

3794—Popular Style for Growing Girl.—This model is youthful and becoming. It is cut in sizes 8, 10, 12 and 14 years. The belt may be replaced with a sash or string girdle or the fulness may be held with an elastic band run through a casing. To make this style for a 12-year size requires 1¾ yard of 27-inch material for the guimpe and 3⅜ yards for the dress. Mohair, jersey cloth, serge, gabardine, velveteen, duvetyne, linen, satin and taffeta are suitable for this style.

3701—Top Garment for Winter Days. A good coat style is shown in this comfortable model for winter days. It is cut in sizes 6, 8, 10, 12 and 14 years. Velours, polo cloth, bolivia, tweed, heather mixtures, velveteen, corduroy, pile fabrics such as caracul, or plush are good for this style. Serge and jersey cloth, too, are desirable. A 10-year size requires 2⅜ yards of 48-inch material.

3400—An "Easy to Make" Apron. It is cut in small, medium, large and extra large. A medium size requires 2¾ yards of 27-inch material. Checked gingham with rickrock braid for trimming is nice for this. Seersucker, percale, lawn, alpaca, sateen, drill, or crash, could also be used.

3789—Pleasing House Dress. As a work dress or one for general wear, this will prove very desirable. The lines are comfortable and the closing convenient. The sleeve may be finished with buttons and buttonholes and turned back over the arm for convenience while working. This is a very good one-piece dress style. Cut in sizes 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires 5⅜ yards of 36-inch material. The width at the foot is about 2¼ yards.

3505—Practical Outfit for the "Little One." Four sizes, 6 months to 1 year, 2, 3 and 4 years. A 1-year size requires 1⅛ yard for the dress and 1⅜ yard for the petticoat and ⅜ yard for drawers of 36-inch material. Muslin, cambric, nainsook and lawn are good for all of the designs here portrayed. The dress may also be of silk, henrietta, albatross, pique, gingham or chambrey, and the drawers of domet flannel.

3756—Simple Frock for School or Play. The comfort and simplicity of this style will readily appeal to the busy mother. It is cut in sizes 4, 6, 8 and 10 years. A 6-year size requires 2⅝ yards of 27-inch material. Dotted percale, cotton repp, pongee, challie, gabardine, gingham and calico are all suitable for this style.

Whose Pattern Order?

An order has been received from West Yellowstone, Mont., for patterns 3370-14 and 3426-40, which was not signed. Will the party who ordered these patterns send name and address at once?

Mutton Stuffed and Roasted.

For this purpose have either the leg or shoulder of mutton boned. Stuff the boned piece and tie into good shape. Roast in a hot oven, allowing about 20 minutes to the pound. Add to the dressing more fat, unless the meat is very fat. In making the gravy, follow the direction given above.

Recipe for Summer Sausage.

Will you please give me a recipe for summer sausage?—C. W. M., Pueblo county, Colo.

The following is a good recipe for summer sausage:

25 pounds cured beef free from sinews.
15 pounds pork trimmings.
6 ounces white pepper.
1 ounce whole black pepper.
1 ounce whole mustard seed.

This sausage can be made in cold weather only. All the meat is put through the grinder and spices added. No salt is needed, the cured beef being salty enough. Mix it all thoroughly until it is evenly seasoned. Spread it out in a cool place and leave it for from 36 to 40 hours, then stuff it into hog-bung casings and let hang over night. Smoke over very cool smoke for several days. This sausage can be kept in a dry place the year round. If it gets moldy, simply wipe off the mold.

Milking Machines Practical.

Milking machines have passed the experimental stage. It is not possible nor practical for every man who milks cows to have a milker, but all are interested in studying the possibilities of such machines and in knowing just how they work. Among the many exhibits of interest in the "Dairy Day" meetings being held over the state will be one of the latest milking machines now on the market. This machine milks two cows at one operation. There will also be on exhibition the latest and most improved devices for handling milk and cream, testing, weighing, and other equipment which tends to lighten the work of dairying. Dairying, while not a "get rich quick" proposition, has demonstrated that it is a feature of farming which can be depended on to bring steady returns even when many farm enterprises have failed to return any profit.

Butter Made Below Consumption.

We would urge careful reading of the article in this issue on the dairy outlook. Despite the fact that dairymen must continue to face the competition of butter substitutes it is shown that the butter consumption of the country is outstripping production as is evidenced by the fact that we are again importing butter. It seems almost incredible that a country like Denmark can ship our feed across the ocean and on land valued much higher even than the land in the older dairy sections of this country, produce butter and place it on the markets of the United States at a profit.

Another as yet undeveloped outlet for milk is the cheese industry. Cheese factories should be established in the dairy sections of Colorado. The market is at our doors and can be greatly increased by educating our people to a greater appreciation of cheese as a food. We note in a local paper that a farm woman in the Loveland dairy section who learned how to make cheese from her Swiss parents, has started a little cheese factory on their farm and now has some six or eight hundred pounds of cheese in process of curing.

Silage Worth $10 a Ton.

Silage and alfalfa is the basal ration on the purebred dairy cattle farm of James Gibson of Jefferson county. "I couldn't do without silage," said Mr. Gibson. "I have cows giving 20,000 pounds of milk a year and they get all the alfalfa hay and corn silage they will eat. I consider silage worth $10 a ton to the man having good purebred dairy cows." Mr. Gibson considers Minnesota 13 as the best corn to grow for silage. He gets from 10 to 12 tons to the acre and figures that it cost not far from $3 a ton to produce. Mr. Gibson says he could not grow out his young stock as he does without silage. A breeder from another county who does not have silage sent a young heifer to Mr. Gibson for breeding. She was very thin, but he got her to eating silage in a few days and when the owner came for her in his truck four weeks later he hardly knew his own heifer. She had put on a hundred pounds of weight in the time she had been in Mr. Gibson's care and getting all the silage she would eat.

YOU get real satisfaction out of a dish of Jell-O. It gives the right touch to a meal, just light enough and just sweet enough.

No matter how heavily you may have eaten, you always feel the need of a dessert at the end, otherwise the meal seems incomplete. Jell-O fills that need exactly.

The American Offices and Factory of The Genesee Pure Food Company are at Le Roy New York, in the famous Genesee Valley Country.

The Offices and Factory of The Genesee Pure Food Company of Canada, Ltd., are at Bridgeburg, Ontario, on the Niagara River.

JELL-O
America's Most Famous Dessert

Fifty Years of Business Success.

A business firm which has weathered the storms of fifty years, growing in that period from a little concern using one small room, to one with five million customers and occupying a hundred acres of floor space, may well take some pride in the accomplishment. A business with that sort of a career must have been operated on sound business principles. Montgomery Ward & Company, the pioneer mail order business of the country, is celebrating its fiftieth anniversary by taking a backward look and is setting forth in its annual catalogue some of the early history of the business, initiated as it was by a young man who had conceived the idea that the competition in buying offered to the city customer could be brought to the inhabitants of the country and the small villages, the success of which idea has been demonstrated by the growth and development of this organization and many others taking this method of reaching customers. It is an interesting story of a great business success and many will take pleasure in reading the reminiscent paragraphs printed in honor of this fiftieth anniversary of the oldest mail order house in the business world.

One crop farming of almost any kind is a risky proposition. The wheat farmer or the cotton farmer are conspicuous examples. When the crop is marketed, and the grocery, the machinery, and labor bills are paid, they are broke. Following a tour of Colorado by the extension specialists of the Colorado Agricultural college they offered this suggestion based on their observations: On every half section farm, ten dairy cows, five good brood sows, three hundred purebred hens, and a few turkeys and geese.

An inspection and repair tour among the farm implements now may save many hours during the summer rush.

A dust mop made of cotton waste saturated with a mixture of boiled linseed oil and oil of paraffin, will aid in house cleaning work.

SPRAY Rigs of All Sizes For All Uses

The OSPRAYMO LINE

You must spray to get fine fruits, vegetables, shrubbery, flowers. Let our catalog tell you about the famous *High-power Orchard Rigs, Red Jacket and Yellow Jacket Traction Potato Sprayers, Bucket, Barrel and Knapsack Sprayers, Hand Pumps, etc.*

An OSPRAYMO sprayer means one that will spray more effective. Send for late catalog. Don't buy any sprayer till it comes. Representative will call at Denver.

SENIOR LEADER Power Orchard Sprayer

Field Force Pump Co., Dept. P. Elmira, N. Y.

HUBAM

BECAUSE it gives in one year all the benefits the common clovers do in two, Hubam has become "The World's Greatest New Plant." This is the new annual white sweet clover. In conjunction with The DeGraff Food Company of DeGraff, Ohio, we have grown a large acreage. Unusual opportunity for profit in 1922 by growing Hubam. Seed limited and demand great. Write for booklet and prices on this guaranteed North Dakota grown seed.

AMENIA FARMS, Amenia, North Dakota

GOOD SEEDS

Grown From Select Stock—None Better—52 years selling good seeds to satisfied customers. Prices below all others. Extra lot free in all orders I fill. **Big free catalogue** has over 700 pictures of vegetables and flowers. Send your and neighbors' addresses.

R. H. SHUMWAY, Rockford, Ill.

SEWING MACHINES

SOLD FOR STORAGE.

Singers, Whites, New Homes and others. $1 to $25. Write for FREE Illustrated CATALOG. We pay the freight.

RELIABLE SEWING MACHINE CO.
532 15th Street. Denver, Colo.

TOWNSEND FARM

Formerly Mountain View Poultry Farm

Annual Clearance Sale

WE HAVE A SURPLUS STOCK OF

Cocks, Cockerels, Hens and Pullets, in S. C. R. I. Reds, S. C. Buff Orpingtons and White Plymouth Rocks.

These birds are of the same general quality as those that won best display in each of these varieties in the recent Stock Show at Denver. We believe they will improve the quality of any flock in the west. We have about 300 of these birds to dispose of, which consist of the choice of about 4,000 chicks after very careful selection under the advices of the best poultry experts of America.

We offer these birds for sale at reasonable prices. No bird shall leave our place that does not possess creditable quality. Our principal aim is to have these birds distributed among the worthy poultry breeders of the west.

This announcement is not intended as an advertisement, but as an invitation to the poultry men of the west to share in some of the qualities of our stock.

TOWNSEND FARM, Edgewater, Colo.

Blakeland Business Leghorns.

This flock of 100 pullets laid 80 eggs several days in succession during zero weather. 24 pullets from same strain, hatched May 15, laid their first egg when 4 months and 18 days old. They laid a total of 4,804 eggs in 365 days. These eggs brought $191.92, or $8.33 average per bird. The highest record pullet from that flock produced 272 eggs. Our highest record pullet for 1921 laid 292 eggs. **The foundation for such a business cannot be bought for a song. Our prices are reasonable. Let Blakeland start you right. Blakeland stands for Quality FIRST, LAST, ALWAYS!**

BLAKELAND EXHIBITION LEGHORNS
BLAKELAND BUSINESS LEGHORNS

Write for Catalogue B.

BLAKELAND FARMS, Littleton, Colo.

PLACE Your Order Now for **EGGS OR BABY CHICKS**

From Our Bred-to-Lay

S. C. W. LEGHORNS

The FOWLER EGG FARM STRAIN OF LEGHORNS has been bred for eggs. Hoganized and type tested for so many years that they will give you a LARGER FLOCK AVERAGE of big white eggs and make you more real money than any other strain of Leghorns in the west. Our customers say so when sending back year after year for more eggs and chicks from The Fowler Egg Farm. A customer at Avondale, Colo., writes: "Can I get 500 chicks in March? I bought 500 from you last year; raised 235 pullets and 221 cockerels. I had 2,000 chicks in all from four other poultry farms. Your chicks were by far the best and healthiest that I received. I cannot say too much for the QUALITY of your chicks. They are just as fine as can be had." These kind of letters and repeat orders are what count. There is a reason.

After many years of careful breeding and selecting for increased egg production, we have developed a strain of extra large Leghorns that lay big white eggs. Our pullets mature quick, many laying at 4 months and 18 days and weighing 4 to 5 pounds in less than 9 months. The long deep bodied hens with large combs. You cannot get better every trait at twice our prices, no matter where you go. Write for Catalog, prices and facts from customers before you buy eggs or chicks. Its free and tells all. Write

FOWLER EGG FARM, Route 1-B, Fowler, Colo.

LOWER'S POULTRY FARM

ARVADA, COLORADO.

Has developed a strain of all-year laying Single Comb Rhode Island Reds that will lift your mortgage and put you in the way of making money with poultry. **Descriptive Booklet on Request.**

STOCK, EGGS FOR HATCHING, BABY CHICKS.

Profitable Farm Poultry

W. E. VAPLON.

Questions about the farm flock promptly answered by letter. Free advice on all phases of poultry production. Address all inquiries to Poultry Department, Western Farm Life, Denver, Colorado.

Have you mated up your breeding pens for this year's hatching eggs? It is impossible to get good hatches unless the eggs are from strong, vigorous hens. It is a mistake to use pullet eggs for hatching. The pullet eggs may hatch as well, but the chicks will be smaller and weaker. They will be more susceptible to disease and at the end of the season the percent of chicks raised will be smaller than from the use of eggs produced by mature hens. The best hens to use for breeders are hens that demonstrated their capacity for production as pullets in their first year.

Using eggs from the whole laying flock for hatching new stock will not tend to improve the flock. In the spring every hen will be laying. More eggs will be set from poor producers than from hens that have been the year-round layers if this practice is followed. It is all right to let the breeders run with the general flock through nine months of the year, but three weeks before eggs are to be set confine the ones selected as breeders and mate them with a good male. They should not be kept in close quarters. Some farm poultry producers confine the general flock during the breeding season and let the breeding hens have free range. Close confinement will result in the production of eggs low in vitality.

The male is half the flock, therefore it will pay to get a good one, known to come from a laying strain, if you expect to increase the egg production of your flock. It has been definitely shown that heavy egg production is directly transmitted from the hen through her male offspring to the pullets he sires. It is much more strongly transmitted in this way than from the high producing hen to her own daughters. This is a fortunate circumstance for farmer poultry producer, as it enables him to improve the egg producing capacity of his flock at a minimum of expense through the introduction of pedigreed males from high egg-producing lines.

Do not run too many hens with one male. With the heavier breeds as the Rocks, Wyandottes, Rhode Island Reds or Orpingtons, twelve to eighteen hens is about the limit. Eighteen to twenty-five hens can be run to a single male in the breeds similar to Leghorns, Minorca or Ancona. Eight to twelve is enough with heavy breeds as the Bramas, Cochins and Langshans. On the free range a larger number of hens can be run with a single male than where the breeding flock is rather closely confined.

Certified Flock of Poultry.

What does certified mean as applied to a flock of chickens?—G. D., Crowley county, Colo.

An effort is being made in Kansas at least, through the extension division of the agricultural college, to establish a system of certifying standard farm flocks. The plan involves the co-operation of some thoroughly competent poultryman in each county or community who will pass on flocks in his jurisdiction and report to the state office those which he considers suitable for listing as certified standard flocks. It is something on the order of the accredited list which the Federal government is establishing in the matter of eliminating tuberculosis in cattle herds.—G. C. W.

Fowls May Have Tuberculosis.

A dangerous and apparently contagious disease has attacked my Rhode Island Red chickens. The fowls get droopy, have pale combs, fall off in weight and seem to lose all life and the last few days before they die lose their appetites entirely. The livers are enlarged and have large hard yellow lumps all through. The intestines in most cases are affected in the same way. Can this disease be cured and can it be prevented from spreading through the whole flock? Will the grounds and quarters be infected in case I should have to kill them and make a new start? What would be an effective way of disinfecting the quarters? B. F., Idaho.

From the symptoms given I am inclined to believe that you have an aggravated case of tuberculosis. You had better call in a competent veterinarian or send some of the sick fowls to your state agricultural college for examination. Even if there were a cure it would not pay to risk contamination of the flock as the value of a single fowl is small as compared to the time lost and expense incurred.

The treatment consists in isolating all cases which look suspicious, cleaning up and burning all litter and covering the poultry house floors with fresh clean earth. By doing this you should prevent further spread of the disease.—W. E. V.

Self-Feeders for Poultry Pay Well.

A clear profit, over and above all costs, of $2.11 on every hen, was the record made by W. W. Goodwin of Canon City, Colo., in 1921. Mr. Goodwin had a flock of 361 White Leghorns and he made a profit of $761.70, after paying for his feed, labor, taxes, and interest on capital. He attributes his success largely to his little home-made self-feeders, his alfalfa pasture and his warm, well ventilated houses.

Mr. Goodwin feeds a balanced ration composed of whole wheat and cracked corn, ground oats, corn meal, ground wheat and meat scraps. The dry mash is left before the hens all the time. The scratch grains are fed sparingly in the morning, but a full feed is given at night.

Alfalfa and shade, Mr. Goodwin believes, are excellent for poultry, so he has planted his alfalfa pasture in a young orchard and gives the flock free range.

Mr. Goodwin's poultry houses are of the common shed roof type with open fronts and plenty of windows in the south sides. The other three sides of the houses are boarded tight and covered with roofing paper. The dropping boards and roosts are in the north sides of the houses with the nests beneath the dropping boards. A good clean litter is always kept on the floors.

A fine farm management and poultry culling meeting was recently conducted by the Colorado Agricultural college on Mr. Goodwin's farm. One hundred and twenty-five farmers turned out to study the farm records of the flock and to see the poultry culling demonstration.—Paul C. Jamieson.

Putting Eggs in Storage.

Is it practical for a farmer to put his eggs in cold storage during the season when eggs are low in price? How long do eggs keep good and at what temperature should they be kept? Are there any laws regulating the storage and sale of these eggs.—R. M. J., Kit Carson county, Colo.

It might be advisable for a farmer to put eggs in cold storage if he is close enough to a good storage plant. A farmer cannot successfully hold eggs in cold storage in his own behalf. Eggs must be kept at an exact temperature to come through cold storage properly and only in a well equipped plant conducted by experienced men can this be done. For home use the water-glass method is the best process to use. Stored eggs cannot legally be sold as fresh eggs. If you contemplate selling such eggs write to the Chamber of Commerce, Denver, for information on the laws regulating the selling of stored eggs.—W. E. V.

Which Variety of Reds.

Are Single Comb Rhode Island hens better layers than the Rose Comb Reds? The poultry journals seem to advertise more single comb stock. Where can we get a book telling how to care for and raise poultry?—O. P., Wyoming.

Single Comb Reds are more popular than the Rose Comb variety. This probably explains why more advertising of the single comb variety appears in our papers. So far as I know there is no difference in the egg production of the two varieties. I would suggest that you write to the Reliable Poultry Publishing Co., Quincy, Ill., for their booklet on Rhode Island Reds, costing, I believe, 75c. You can get a large number of bulletins on poultry production by writing to your representative in Congress asking for the free bulletins issued by the United States Department of Agriculture. Write to your state agricultural college at Laramie and if you have a county agent, get in touch with him.—W. E. V.

Curing Egg-Eating Hens.

My hens persist in eating eggs. I feed them all the skim milk they will drink, what corn silage they will clean up, barley, hog millet, and corn as a scratch

eed. Can you suggest a remedy for the gg-eating habit? They have also had yster shell and meat scrap.—C. C. L., Weld county, Colo.

Hens acquire this habit as a result of he accidental breaking of an egg in the est or on the floor. After the habit s formed they learn how to break the ggs by pecking at them. To prevent heir eating eggs darken the nests so hat if an egg is accidentally broken it vill not be seen. Keep the floor of the oultry house well covered wtih straw o that eggs dropped on the floor will ot be broken. Visit the hen house arly in the morning, removing any roken eggs which may have been ropped under the roosts. In a short ime the hens that have formed the abit will forget it and others will not ave a chance to contract it.—W. E. V.

Breeding Exhibition Parti-Colored Birds

What is meant by the use of the term cockerel breeding," "pullet breeding" nd "exhibtion breeding"?—W. F. S., esa county, Colo.

In breeding some parti-colored varieies, notably the Barred Plymouth ocks, separate matings are necessary o produce males and females of the reuired exhibition color. Ordinarily in arm flocks of this variety the cockerels re always lighter in color than the pulets. To produce cockerels of the exibition shade of color, females for the ating pens much darker than the exibition color are selected, the male bird eing of good exhibition color. The tandard of Perfection requires that he barring of the feathers both black nd white should be about even in width. o produce pullets of exhibition color emales for the breeding pen should be f exhibition color, but the male for his pen should be much lighter than hat required by the standard, the white redominating over the black.

Some persons when first hearing hese terms assume that pullet mating eans producing more pullets than ockerels. The foregoing explanation ill give you a general idea of what is eant by cockerel and pullet matings. —W. E. V.

Western Farm Life has some poultry ecord blanks for keeping egg production, money received, poultry expenses nd other similar information, which we ill send to our readers on request. hese records will simplify keeping our poultry accounts.

U. S. G. G. Membership Increases.

More than 1,000 co-operative elevator ssociations and local co-operative rain growers' associations have entered into contracts with U. S. G. G., nc., and the most conservative estimate laces its farmer membership at approximately 100,000 when membership olicitation is complete in the territory epresented by the shipping association nder contract to handle U. S. G. G. rain. Where organization has been ompleted the local membership averges about 100 to each shipping point epresenting 2,000 bushels of grain ach. Illinois leads in number of shipping association contracts, but in point f strictly co-operative elevators Nebraska leads with 231. Iowa comes hird with 119 co-operative elevator ontracts. There are now seven cooperative elevators signed up in Colorado and six local grain growers' associations.

At nearly a thousand local shipping oints meetings of members were held ebruary 7 to elect and instruct delerates to the Congressional district conventions to be held February 20—25, which in turn will send delegates to the ational meeting in Chicago, to be held eginning March 21. The delegate lected at a district meeting will carry he voting powers of the total membership for his district. A new board of irectors will be elected at the national neeting, 11 for a two-year term and 0 for a one-year term, these to be replaced at the 1923 annual meeting by wo-year directors.

Officers of the U. S. G. G., Inc., estimate that 200,000,000 bushels of grain nder contract for next year's marketng is a conservative estimate based on erritory in which local co-operative levator contracts have been made, and ew territory will be entered from time o time.

Epitaph for John Tite, who died reently at Anderson Hill: "He piped wa-er 70 rods to his steers, but for 30 ears his wife carried water 50 yards, p five steps."

Put barium carbonate on the menu f your barn rats. They will soon hunt nother boarding place.

Crop Values Drop 60 Per Cent.

The average acre value of ten crops constituting nine-tenths of all crop production in the United States dropped from $35.76 to $14.48, or 60 per cent, during the two years 1919—1921, according to the United States Department of Agriculture. The decline is unparalleled within the scope of records of the department dating back to 1866.

During the years immediately following the Civil war the general trend of the average was downward, dropping from about $14 or $15 an acre to less than $8 by 1896, the lowest point in the industrial depression of that time. An advance then set in and by 1913 the average acre value was $16.49. The following year there was a slight decline to $16.44, caused by the low price of cotton, but in 1916, the year before the United States entered the World war, the average advanced to $22.58, or $6.14 in two years.

By far the greatest gain in one year in average value an acre for 10 crops was $10.69, from 1916 to 1917, the average for the latter year being $33.25. The average for 1918 was $33.73. The average continued to rise and in 1919 reached the peak of $35.76. A decline then set in, the average dropping $21.28 an acre, or 60 per cent, in the two years that followed.

From the Nation's Capital.

(Continued from Page 9.)

such amendments as may be agreed to whereupon the previous question shall be considered. This resolution was referred to the committee on rules, of which Philip P. Campbell of Kansas is chairman, and the farm organizations are now asking that all possible influence be brought to bear to have this bill reported out for action by the committee.

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The Eight-Item Soldiers' Bonus Levy Plan.—The soldiers' bonus proposition is a matter of deep concern to farmers, judging from the interest the farm organization representatives are taking in the various propositions before Congress. Every one wants the soldiers to have a bonus, providing a way can be devised to load the cost onto the other fellow. The House ways and means committee agreed upon the following eight-item bonus levy plan:

Two and one-half per cent on the undivided profits of corporations; on parcels post packages, 1 cent for each 25 cents postage; 1 cent a gallon on gasoline; 25 cents a horsepower on automobiles; double the present tax on admissions above 25 cents; increased documentary stamp taxes; increase of 50 cents a 1,000 on cigarettes, and 2 cents a pound on tobaccos. These taxes were estimated to yield $316,000,000.

The National Grange has taken a decided stand against this tax program. H. C. McKenzie, tax representative of the American Farm Bureau Federation, points out several objections to the eight-item tax plan. The American Farm Bureau Federation is joining with the National Grange in demanding the re-enactment of the excess profits tax.

President Harding is opposed to the enactment of the special taxes embodied in the eight-item plan, and also to a return to the excess profits tax. There is a strong sentiment in Congress in favor of an issue of short-time treasury notes to cover the estimated cash payments of about $800,000,000, which would be needed to pay the bonus.

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Colorado River Water and Irrigation Problems.—The seven states included in the watershed of the Colorado river have passed laws with a view to co-operating in matters relating to the uses of the water of the river and its tributaries for irrigation purposes. These states have appointed commissioners to represent them in dealing with this matter, and Secretary of Commerce Hoover has been selected to represent the national government. A meeting was held recently at which an attempt was made by the commissioners to formulate a pact between the states, but an agreement was not reached. Another meeting will be held at Phoenix, Ariz., in March, at which it is hoped that a satisfactory solution of the irrigation and water problems may be had.

The lower states through which the Colorado river runs want the states in which is included the upper watershed to agree to a definite limitation on the future use of the water for irrigation within their boundaries. The upper states contend that there is water enough for all, and that there is no need for a limit on the future use of the river's waters.

Frantz's Famous Winter-Laying Leghorns

500 Pullets Laid 22,660 Eggs

In November December January

(While other breeds and strains were hoarding free.)

We sold the eggs on the market for $1,400 and produced them with $250 worth of feeds. $1,150 Profit in 3 Months. They Will Do the Same for You, as they have done for Thousands and Thousands of others.

Mrs. Kelly McEndoffer, Denver, sold $2,100 worth of eggs from 325 pullets in one year.

A. V. Brooks, California, gave our stock a trial last year. It proved more than good, and this season he wired for 7,200 hatching eggs.

A Kansas City man sold $75 worth of eggs daily in winter from less than 2,000 pullets; feed cost per day, $20.

E. Lambuth, Canon City, also sold $2,200 worth of winter eggs from 750 pullets in 4 months.

J. L. Safeblade, Illinois, gathered 246 eggs in December from 12 pullets.

We have more than proven our claims, and if you want the WINTER EGGS AND BIG PROFITS you MUST HAVE FRANTZ'S WINTER LAYING LEGHORNS. RESULTS ARE CERTAIN when purchased direct from us. GUARANTEED FERTILE HATCHING EGGS and 50,000 STRONG CHICKS alive at your door at prices you are SURE to make big profits. Come and see us. Write

Osee C. Frantz, Box F, Rocky Ford, Colo.

BABY CHICKS
Or Eggs for Hatching

LARGEST HATCHERY AND POULTRY FARM IN WESTERN COLORADO.

INCUBATOR CAPACITY 15,000 EGGS.

1,200 laying hens, thoroughbred S. C. W. Leghorns, Ferris strain, from trap-nested hens with records of 265 to 300 eggs per year. February 1st have already booked orders for 14,000 chicks for early delivery. Get your orders in if you want them filled on time. **Prices:. 18c each for March and April; 16c for May and June. F. O. B. Fruita. Eggs $1.50 per setting of 15, or $7.50 per hundred.**

FAIRLAWN POULTRY FARM
FRUITA, COLORADO

ANNOUNCEMENT

ROMOCO POULTRY FARM
LITTLETON, COLO.

We take pleasure in announcing that Mr. George M. Littler, well known Breeder and Showman of Rhode Island Reds, has joined the staff of Romoco Poultry Farm.

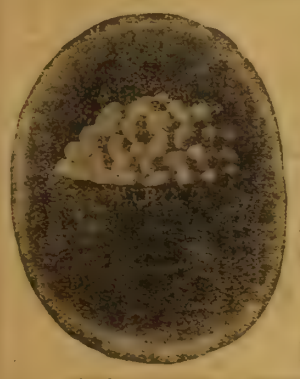
The Littler Strain of Show Winning Reds are now added to Romoco Breeding Pens.

ROMOCO CAN SUPPLY YOU WITH THE BEST SHOW WINNERS OR UTILITY REDS S. C. OR R. C.

Prices on Request—Write for Catalogue W.

Western Agents for Darling's Meat Crisps, Romoco Mash, Poorman's Famous Feather Brooders.

THEY RAISE THE CHICKS. NO COAL—NO OIL—NO NIGHT WATCHING. $5 for Feather Board—75-chick capacity. No upkeep and they last for years.



BABY CHICKS AND HATCHING EGGS

FROM MERK'S FAMOUS STRAIN OF S. C. WHITE LEGHORNS.

That have the laying habit bred into them through years of patient selecting and careful mating, and have the vitality to maintain it. Send for circular and price list. We guarantee to please you and our prices will surprise you.

Merk's Poultry Farm

Box W. ROCKY FORD, COLO.

SUNRISE S. C. WHITE LEGHORNS

Bred for heavy winter egg production, and they do it. 100 pullets laid in the three winter months 4,848 eggs, and better results later. You can do the same when the winter egg is bred in them. Give our winter-laying Leghorns a chance and you will be convinced. Write now and get our price list on guaranteed fertile hatching eggs and husky strong baby chicks that will live, from free range flocks. We have a few matured cockerels for this year's breeding for sale, from $2 up to $5.

SUNRISE POULTRY FARM.

F. W. Stanbridge & Son, R. R. 3, Rocky Ford, Colo.

Farmers' and Stockmens' Exchange

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POULTRY

PLYMOUTH ROCKS.

PURE BARRED ROCKS, $2.50; EGGS, $1 SETTING; $5, 100. Ida Ham, Burden, Kan.

PURE BARRED ROCK COCKERELS—$2 AND $3; none better. A. J. Joslyn, Gillette, Wyo.

WHITE ROCK COCKERELS FROM HEAVY LAYing strain, $2, $2.25. Mrs. Emma Koch, Hershey, Neb.

PARTRIDGE ROCK COCKERELS FROM MADison Square Garden winners. Cora De France, Berthoud, Colo.

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BARRED PLYMOUTH ROCKS, BRED FROM trap-nested heavy laying stock; winners in public contest. John Tobias, Wheatridge, Colo.

BARRED ROCKS, RINGLETS; 84 PREMIUMS, 34 firsts. Cockerels, $3, $5, $7.50. Eggs, 15, $3; 30, $5. Mattie A. Gillespie, Clay Center, Kan.

HAVE FEW CHOICE WHITE COCKERELS LEFT, $2 to $4 each. Eggs $1.50 per setting of fifteen. Quality Fruit & Poultry Farm, Manzanola, Colo.

PURE THOMPSON'S IMPERIAL RINGLET DARK cockerels; grand breeders, show birds. Eggs $3, $5 setting. Mrs. Robert Simmons, Severy, Kans.

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BARRED ROCK COCKERELS, FERTILITY GUARanteed. Parks strain, higher egg production; no culls; guaranteed; $2.50 each. Albert Tracy, Fort Morgan, Colo.

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HICKS' BARRED AND WHITE ROCKS WON 50 ribbons at recent Oklahoma and Kansas State shows in classes of 300. Cockerels and pullets, $2 to $10. Write for mating list. H. F. Hicks, Cambridge, Kan.

HICKS' BARRED AND WHITE ROCKS WON 50 premiums at Oklahoma and Kansas State shows in December and January in classes of 300. Eggs $3 and $5. Write for mating list. H. F. Hicks, Cambridge, Kan.

RHODE ISLAND REDS.

PUREBRED ROSE COMB RED COCKERELS, $2, $3, $5. John Nicholas, Argonia, Kan.

CHOICE SINGLE COMB RED COCKERELS; also eggs and chicks. Gifford Ernest, Rocky Ford, Colo.

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SUPERIOR LAYERS; CIRCULAR FREE. GOLDen Rule Ancona Farm, Carrollton, Mo.

EXTRA GOOD SINGLE COMB ANCONA COCKerels, $2 each. Eggs, 15 for $2, or $6.50 per 100. Barred Rock eggs the same. Julia Ditto, Newton, Kan. Route 7.

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PURE BUFF LEGHORN COCKERELS, $1.25; trio, $3. Jennie Snelling, Eckley, Colo.

ROSE COMB GOLDEN BUFF LEGHORN COCKerels; winter layers, $2.00; three for $5. H. A. J. Coppins, Arnold, Kan.

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PUREBRED BABY CHICKS—LEADING VARIEties; popular strains. Exhibition and bred-to-lay qualities combined; special 20 per cent cash discount extended to March 1 only. Hatch every week; circular free. Anderson's Farm Hatchery, Juniata, Neb.

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EGGS ROSE COMB REDS. W. Zabriskie, Pagosa Junction, Colo.

"RINGLET" BARRED ROCK EGGS, 100, $6. Mrs. Lynn Bailey, Lyndon, Kan.

PUREBRED WHITE LANGSHAN EGGS, $6—Mrs. Allan Smith, Sterling, Kan.

BARRED ROCK EGGS FOR HATCHING, $4.50 hundred. Roy Black, Pauline, Neb.

CHOICE ROSE COMB BROWN LEGHORN EGGS, 5c each. Mrs. Ed Kelley, Dunlap, Kan.

PUREBRED ROSE BROWN LEGHORN EGGS, $8; chicks, $15. James Sedlock, Ord, Neb.

EGGS—SELECTED PEN OF S. C. BLACK MInorcas. W. Zabriskie, Pagosa Junction, Colo.

EGGS—PUREBRED LIGHT BRAHMA, 15, $1.50; 50, $4; 100, $7. Mrs. Grace Buskirk, Pender, Neb.

WHITE WYANDOTTE HATCHING EGGS, $1 setting, $5 100, prepaid. Shedd's, Aurora, Colo.

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DARK, BRILLIANT R. C. REDS, BRED LAYERS, chicks, $16; eggs, $6, 100. Charles Sigle, Lucas, Kan.

S. C. WHITE LEGHORNS—EGGS, 15, $1.50; 100, $6. Baby chicks, 100, $16. W. L. Stokesberry, LaJunta, Colo.

BARRED PLYMOUTH ROCK EGGS FOR HATCHing, $1 per setting of 15. Mrs. C. J. Davidson, Fort Lupton, Colo.

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SINGLE COMB WHITE LEGHORN EGGS AND chicks, from winners at Nebraska State show. Three pens and fine flock; heavy laying strain. Evergreen Poultry Farm, Exeter, Neb.

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PUREBRED DARK BROWN R. C. LEGHORN hatching eggs, $6 per 100. Also baby chicks after March 1, $13 per 100. Hogan tested stock. Booking orders now. Mrs. Arthur Henkle, Route 1, LeRoy, Kan.

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GOODWIN'S BIG TYPE S. C. WHITE LEGhorns, winners in Utility Class at Colorado State fair and Canon City show. Baby chicks, hatching eggs. Write for catalogue. W. W. Goodwin, Route 2, Canon City, Colo.

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S. C. WHITE LEGHORNS, STANDARD QUALity; the best winter layers. Hatching eggs and day-old chicks from yearling hens on free range. Prices reasonable. Book your order early. Willow Creek Poultry Farm, Box 657, Lamar, Colo.

BARRED PLYMOUTH ROCK EGGS FOR HATCHing, from pens both light and dark, $3 for 15 and $5 for 30; from flock, $5 per 100 and $1 for 15. Some of the best birds I have ever had in these pens and flocks. Chester Blunt, Rt. 1, Greeley, Colo.

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FOR SALE—EIGHT MAMMOTH BRONZE MALE turkeys, $8 each, F. O. B. Wiggins. The Nile Farms, Wiggins, Colo.

BRONZE TURKEYS, NATIONAL WESTERN AND Heart of America winners. Brown Chinese Geese. Cora DeFrance, Berthoud, Colo.

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LARGE GRAY FARM GEESE, $3 EACH. GUS Koch, Hershey, Neb.

DUCKS—ROUENS, PEKINS, RUNNERS, MUSCOVYS. Geese, African, China, Toulouse. John Hass, Bettendorf, Iowa.

WHITE CHINESE GOOSE EGGS, 40c; GANDERS, $3.50. White Runner baby ducks, eggs. Vivian Anderson, Oswego, Kan.

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WORLD'S BEST INCUBATORS, BROODERS and other poultry supplies. Write for descriptive circular. Rodney Waino, Ames, Kan.

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THE DENVER INCUBATORS WILL HATCH EVery egg any other machine will hatch, besides some others won't hatch. The price is right, the service right, and the incubator is right. Colony Brooders—Hot-Blast, coal burning brooders, or Sol-Hot oil burning brooders, will raise your chicks to perfection. The Denver Incubator Co. & Hatchery, 173 S. Broadway, Denver, Colo.

POULTRY REMEDIES.

DORAN'S CAPE REMEDY, 25c, GUARANTEED. Agents wanted. Doran & Hicks, 1274 Everett Ave., Louisville, Ky.

REX BABY CHICK TONIC, PREVENTIVE AND cure for white diarrhea, gapes, leg weakness; guaranteed; price $1; send for circular. Rex Poultry Remedy Co., Fremont, Iowa.

MIX YOUR OWN EGG PRODUCER, HEALTH tonic, lice killer, etc. Better quality, trifling cost. Ingredients obtainable everywhere. Seven money-making preparations worth dollars, free. Enclose stamp. Hunter, 1525 Baker, Detroit, Mich.

LIVE STOCK

CATTLE.

REGISTERED HEREFORD BULLS—DOMINO-Anxiety bred. Priced to sell. Mrs. Mattie Flowers, Moriarty, N. M.

MILKING SHORTHORN BULLS FOR SALE—Priced very reasonable. W. B. Patrick, R. F. D. 6, Denver, Colo.

AYRSHIRES—FEDERAL ACCREDITED, PUREbred, bull calves cheap. Dr. F. S. Schoenleber, Stockyards, Denver.

RANGE BULLS—REGISTERED HEREFORDS and Shorthorns; reasonable prices. The Lowell Purebred Cattle Co., Union Stock Yards, Denver.

HEREFORDS FOR SALE—THE BIG STRONG vigorous—raised out of doors and Anxiety-bred kind. A well marked bunch of these yearling bulls are ready for service now. Can you use any of them? J. O. D. Ranch, Aroya, Colo.

I HAVE FOR SALE SOME TOPPY BULLS, ST. Lambert breeding on dam's side and Majestic on sire's side. Ready for service. You can't beat these animals for herd headers. Write me for full particulars. If you have the money I'll price them so we'll do business. Hugh Vaughn, Kirk, Colo.

HORSES.

W. S. McCABE, YOAKUM, TEXAS, SAYS: "I had a fine young horse with the worst case of fistula I ever saw, and after using Hutchison's Big Head Liniment, he is completely cured. I also had it good for side bone and can recommend it to be the best liniment on the market." Hutchinson's Big Head Liniment is guaranteed to cure fistula, poll evil, splint, spavin, sweeny, ring-bone, scratches, and will remove wind galls and sitfasts. Send 60c in stamps for bottle by return mail; satisfaction guaranteed or money refunded. Hutchinson Medicine Co., Texarkana, Texas.

HOGS.

ORION CHERRY KING 15TH BOARS OUT OF Defender sows will put extra dollars in your hog lot. The price is right. J. O. D. Ranch, Aroya, Colo.

THREE THOROUGHBRED HAMPSHIRE BOARS, farrowed Sept. 7. Marked right. Will exchange one. John M. Mischke, R. 3, Loveland, Colo.

BLUE HOGS—ACTUALLY BLUE IN COLOR, large, growthy and prolific. Greatest show hog bred. Mention this paper for discount. The Blue Hog Breeding Co., Wilmington, Mass.

FAMOUS EDGEMOOR DUROC JERSEY YEARling gilts, average 400 pounds, bred to champion boar for spring farrow; also open spring gilts of exceptional type. The results of many years' careful breeding. W. H. Marshall, Rt. 3, Littleton, Colo.

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RAILWAY MAIL, GOVT. CLERKS AND CARriers; experience unnecessary. Write for particulars of exams. Mokane Institute, Dept. A-26, Denver, Colo.

ALL MEN—WOMEN, OVER 17, WILLING TO accept Government positions, $135 (traveling or stationary), write Mr. Ozment, 151 St. Louis, Mo., immediately.

STUDY BOOKKEEPING BY MAIL—TAKE ADvantage of the long evenings; easy to learn; rates low; sample lesson free. Stevens Point Business College, Stevens Point, Wis.

WANTED—MEN, WOMEN, OVER 17, COMMENCE $90 to $135 month. Raise to $190. U. S. Government steady positions. Short hours; paid vacations; pleasant work. Common education sufficient. Write immediately—today—for free list positions now open. Franklin Institute, Dept. W125, Rochester, N. Y.

FARMS AND RANCHES

SACRIFICING 34, 80 OR 120—GEORGE WORTham, Worland, Wyo.

FARMS WANTED—SEND FULL DESCRIPTION. Wm. R. Hughes, Middle Granville, N. Y.

WANTED GOOD PAPER FOR EQUITY FINE improved 87. George Wortham, Worland, Wyo.

OKLAHOMA FARMS—WRITE FOR FREE AGricultural booklet. Board of Commerce, Shawnee, Okla.

CASH BUYERS WANT FARM, SPRING DELIVery, from owners only. R. A. McNown, 334 Wilkinson Bldg., Omaha, Neb.

WANTED—TO HEAR FROM OWNER OF GOOD ranch for sale. State cash price, full particulars. D. F. Bush, Minneapolis, Minn.

I WANT FARMS AND LAND FOR CASH BUYers; will deal with owners only. R. A. McNown, 334 Wilkinson Bldg., Omaha, Neb.

WANTED—TO HEAR FROM OWNER HAVING farm for sale; give praticulars and lowest price. John J. Black, 33rd Street, Chippewa Falls, Wis.

SELL YOUR PROPERTY QUICKLY FOR CASH, no matter where located. Particulars free. Real Estate Salesman Co., Dept. 11, Lincoln, Neb.

SELL, BUY OR EXCHANGE, FARM OR CITY property, quickly, no matter where located. Circular "G" free. Farm Sales Bureau, Barry, Ill.

RIO GRANDE VALLEY TEXAS IRRIGATED farms grow oranges, corn, alfalfa; fine climate; will consider exchanges. Lingenbrink, 1454 Pierce Bldg., St. Louis, Mo.

400-ACRE RANCH IN ROUTT COUNTY, 200 acres bottom land under irrigation; cuts 400 tons hay; 200 mesa land, can be irrigated; $8,000 set buildings, modern; water from spring in house and barn, electric lights, R. R. station and postoffice on place. Will sell all or in 160-acre lots. If sold together will take small ranch or city residence property in exchange. Correspondence solicited. E. A. Brooks, Brookston, Colo.

DO YOU WANT A HOME IN A RICH VALLEY near Spokane, on three trans-continental railroads? Where soil is good, rainfall ample, summers cool, winters moderate. The kind of stump land that pays to clear, where a farmer with $1,500 can hope to succeed. Timothy and clover green eight months in year; natural dairy country; land cheap; ten yearly payments at 6 per cent. Humbird Lumber Company, Box D, Sandpoint, Idaho.

SEEDS

ALFALFA SEED, 95 PER CENT PURE, $7 BU., sacks free, track, Concordia. Geo. Bowman, Concordia, Kan.

SCARIFIED SWEET CLOVER SEED, 8c PER LB. Sacks and sample free. Herman Moeller, Cavour, S. Dak.

PURE PEDIGREED GOVERNMENT INDORSED broom corn seed. Write Fanning Broom Corn Seed Co., Oakland, Ill.

LONG'S "GARDEN SECRETS" (17,000 WORDS) free. Delightfully different; mighty helpful. Jesse D. Long, Boulder, Colo.

LARGE WHITE-BLOSSOMED SWEET CLOVER seed, just milled; price 10c per lb. plus sacks. Elliott Ranch, Strasburg, Colo.

TRIANGLE GRIMM ALFALFA SEED, $42.70 PER cwt. Fields state inspected. Sample on request. Triangle Ranch, Cottonwood, S. D.

WHITE BLOSSOM SWEET CLOVER SEED, hulled and recleaned $5 bushel, and unhulled $3 bushel; sacks free. Gus Koch, Hershey, Neb.

RED RIVER SEED POTATOES, EARLY OHIOS, Irish Cobblers; Minnesota grown, $1.75 per bu., Nebraskas, $1.50. Henry Korgan, Hastings, Neb.

HUBAM CLOVER, GREATEST BEE PASTURE ever discovered; extra fine seed, guaranteed genuine, recleaned, scarified, $1 a pound, postpaid Holsclaw, Montrose, S. Dak.

MARQUIS SPRING SEED WHEAT FOR SALE—Champion for all classes at International Wheat Show. Tests 64 lbs. to the bushel. Average 45 bushels to the acre. John M. Davis, Watkins, Colo.

THE BETTER WAY TO KNOW A RELIABLE house is to let their customers tell you about the satisfactory results of our seeds; almost any gardener around Denver will testify. Can't we also serve and please you? The Rock Mountain Seed Co., Denver, Colo.

DROUTH RESISTANT CROPS—IF YOU ARE interested in improved varieties of crops that give good yields in the driest years, write for my descriptive price list of pedigreed field seeds from the Highmore Experiment Farm. Edgar McFadden, Webster, S. D.

ADDITIONAL CLASSIFIED PAGE 20

ANCONAS for Profit

The fellow who wears the BROADEST SMILE and the BIGGEST BANK ROLL now-a-days is the ANCONA MAN. Never before has there been so many folks taking up POULTRY as a BUSINESS PROPOSITION, and the CENTER of INTEREST is the S. C. ANCONA—the greatest business hen ever known.

Don't take our word for it, we invite you to do as many others are doing, TRY THEM OUT with any other breed on earth. No matter what kind you are now breeding, TRY S. C. ANCONAS BESIDES THEM and be convinced just as we were a few years ago that S. C. ANCONA is the BIGGEST LITTLE MONEY MAKER of the age.

THE PUBLIC WANTS THEM—Are you in a position to supply the demand in your territory? If not, write us. We will mail you our free catalogue, giving you valuable information concerning the breed, our methods, and our strain of trapnested and pedigreed Anconas—the

Leading Exhibition Strain of the West

JUST WON AT THE NATIONAL WESTERN—First cock, first hen, first, second and third cockerels, and first and second pullets. No pens entered.

Our strain is bred for EGGS by the only reliable method—the TRAP NEST.

BABY CHICKS AND HATCHING EGGS in any quantity, at PRE-WAR PRICES. We can sell you QUALITY chicks, as low as most hatcheries sell chicks from bought-up market eggs of unknown quality. Book orders at once, and avoid being disappointed.

Great Western Poultry Farm

Box F. Rocky Ford, Colo.

BABY CHICKS Fifteenth Annual Season. Book your order with us. All leading varieties from best selected Hoganized flocks. The kind that's bred to lay. With years of experience at the business and the proper equipment to meet your requirements we can give you best service. Write for price list. *Shelton Poultry Co. Box 3 Alcott Sta., Denver*

Single Comb White Leghorns

200 heavy winter laying pullets lay 9,887 winter eggs in Nov., Dec., Jan. Eggs sold to the market for $411.76, with $71.65 worth of teed Fertile. Day-Old Chicks. Prices on request. feed. Profit, $340.11. Hatching Eggs, Guaran-
THE ORDWAY POULTRY FARM,
J. Schleining. ORDWAY, COLO.

J. R. WILSON'S S. C. REDS

Were Winners of the Blue 1921 at National Western, State Fair, Pikes Peak and Denver Championship Shows. Also first prize Cockerel at State Fair, was first prize Cockerel in Utility, at Denver.
EGGS, BABY CHICKS, COCKERELS.
4501 SOUTH BROADWAY
Phone Englewood 494W. Denver, Colo.

64 BREEDS Most Profitable pure-bred Northern raised chickens, ducks, geese, turkeys. Fowls, eggs, incubators at reduced prices. 29th year. Largest plant. Large valuable poultry book and catalog free. R. F. NEUBERT Co., Box 853 Mankato, Minn.

Additional Classified On Page 20

SEEDS
NURSERY STOCK
LUMBER
MISCELLANEOUS

Come In and Get a Copy of this Big FREE Poultry Book

We want every poultry raiser in this vicinity to have a copy of DARLING'S new poultry book. Written by a former Government expert, it tells all about the feeding methods of famous poultry men and how they use

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Western Agents:
ROMOCO POULTRY FARM,
Littleton, Colo.

No. 204

Lice-Proof Nests

WRITE QUICK for Catalog and our SPECIAL OFFER

Nests won't cost you 1¢ Your hens will pay for them in More Eggs

Get from 20 to 50% more Eggs, have healthier hens, make more money with the Everlasting and Sanitary KNUDSON Galvanized Steel Lice Proof Nests. 60,000 in use. Costs less than wood. Unlimited guarantee. Send name today for Special Offer and interesting literature. Also prices on Poultry Fountains, Brood Coops and other poultry appliances.
WRITE TODAY! Box 546
SEAMAN-SCHUSKE METAL WORKS CO., St. Joseph, Missouri

Baby Chicks

NEW LOW PRICES SEASON 1922

MILLER BABY CHICKS ARE BRED FOR HEAVY EGG PRODUCTION

Customers report pullets lay all winter. 20 varieties to select from. 1,000,000 chicks via prepaid parcel post safe delivery guaranteed. Pleased customers in every state. 19th season. Catalog FREE.
MILLER POULTRY FARMS
Box 605 LANCASTER, MO.

Shipman's S. C. Reds

Were winners of 2d and 4th cockerels at Denver Show, Dec., 1921, also winning 6th and 8th cockerels at Nat. West. Poultry Show, Denver, Jan. 1922. Setting eggs, $5 and $3. Also Ancona setting eggs, from 1st pen cockerel at Denver Show, Dec. 1921, $2 and $3 setting. Baby Chicks.
W. F. SHIPMAN,
Rt. 2, Box 686. Edgewater, Colo.

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Mail today and you will be in time for the next issue.

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Advertisements will be inserted in this department for 7c per word; four or more consecutive insertions, 5c a word each insertion. Remittances can be made by postoffice money order or personal check. Every figure and initial counts as one word. Guaranteed circulation 55,000 copies each issue. Send us a trial advertisement. Write for proof showing how these columns pay advertisers.

For Poultry and Additional Classified See Pages 18 and 19.

SEEDS—(Continued from Page 19.)

SCARIFIED WHITE BLOSSOM SWEET CLOVER seed, $7.50 per cwt. Superior to medium red for hay pasture and fertilizer. Reference, State Bank. R. H. Lyman, Verona, N. Dak.

GUARANTEED CLOVER, $5 BUSHEL; ALFALFA, $6; Red Clover, $10; Grim Alfalfa, $15; Sudan, $2; Timothy, $2.50; Orchard Grass, $20 cwt.; sacks free. Reliable Seeds, Salina, Kan.

ALFALFA SEED, COMMON, 17c LB.; GRIMM, 40c lb.; all highest quality, bright as gold, free of noxious weeds; guaranteed 99.5% pure, 91% growth. Samples free. Wm. Uttermann, Seedsman, Grand Junction, Colo.

HEAD LETTUCE SEED, GENUINE LOS ANgeles (Mountain Iceberg); best commercial variety; ounce, 35c; ¼ pound, $1.10; pound, $3.30 prepaid. Catalog free. Long Seed Co., Boulder, Colo.

NURSERY STOCK

EVER-BEARING STRAWBERRY PLANTS; VERY fine plants, priced right. Write for circular. Boulder Strawberry Gardens, Route 2, Box 113, Boulder, Colo.

EVERBEARING STRAWBERRIES — GUARANteed, thoroughbred, pedigreed plants that grow and bear fruit. Free, descriptive circular, price list and culture directions. J. S. DeHaas, 5573 Pecos, Denver, Colo.

QUALITY FRUITS AND ORNAMENTALS FOR Western planters; 1922 Bargain Catalogue free. Satisfaction guaranteed. Hutchinson Nurseries, Kearney, Neb.

SAVE AGENTS' COMMISSIONS—BUY DIRECT —We have complete stock of fruit, shade and ornamental trees, vines. Send us your list for prices. Northern Colorado Nursery Co., Fort Collins, Colo.

THE CLARK SEEDLING STRAWBERRIES HAVE made Hood river famous as a strawberry growing district. Have made more money for the growers than any other strawberry grown on the Pacific Coast. There is a reason. Oregon Champion Gooseberries, large or small lots. Write for prices. W. R. Gibson & Son, Rt. 2, Hood River, Oregon.

TREES AND SEEDS—REDUCED PRICES ON our quality nursery stocks and wholesale planters' prices; northern grown tested garden, flower and field seeds at low prices; send today for catalogue full of valuable information on culture of plants. Box W, Wichita Nurseries & Seed House, Wichita, Kan.

LUMBER

FIR LUMBER, MILLWORK, RED CEDAR SHINgles, fence posts, from mills to you. Send bill for delivered prices. Lansdown, Box 909M, Everett, Wash.

RED CEDAR SPLIT POSTS DIRECT FROM shipper; prices low. Let us name delivery prices. Send lumber bill for estimate. Stock guaranteed. Kirk Company, Tacoma, Wash.

MISCELLANEOUS

TOBACCO.

CHOICE TOBACCO—CHEWING, 20 TO 25c; smoking, 10 to 20c per pound. Milo Allen, Downing, Mo.

KENTUCKY HOME-SPUN SMOKING TOBACCO, mild and sweet, 10 lbs., $1.50; 20 lbs., $2.75. Tobacco Growers' Union, Lynnville, Ky.

TOBACCO—KENTUCKY'S PRIDE, EXTRA FINE chewing, 10 lbs., $3.25. Mild smoking, 10 lbs., $2.75. Farmers' Club, Mayfield, Ky.

HOME-SPUN TOBACCO—MILD AND MELLOW chewing and smoking, 5 lbs., $1.50; 15 lbs., $3.75. Pigeon Roost Tobacco Co., Sedalia, Ky.

TOBACCO—KENTUCKY FINEST HOME-SPUN, chewing, 10 lbs. $3.10; smoking, 10 lbs. $2.60; 20 lbs., $4.50. Producers' Exchange, Mayfield, Ky.

KENTUCKY FINEST NATURAL LEAF CHEWing tobacco; 10 lbs., $3; smoking, 10 lbs., $1.85; 20 lbs., $3.50. Producers Exchange, Mayfield, Ky.

LEAF TOBACCO, THREE YEARS OLD; PAY for tobacco and postage when received. Chewing, 5 lbs., $1.50; smoking, 6 lbs., $1. Farmers Grange No. 71, Hawesville, Ky.

KENTUCKY LEAF TOBACCO—3 YEARS OLD, nature cured. Don't send a penny, pay for tobacco and postal on arrival. Extra fine quality chewing or smoking, 10 lbs. $3; medium quality smoking, 10 lbs. $1.25. Farmers' Union, D22, Hawesville, Ky.

INVENTIONS.

INVENTIONS WANTED—CASH OR ROYALTY for ideas. Adam Eicher Mfg. Co., Dept. 204, St. Louis, Mo.

RECORD YOUR INVENTION—SEND FOR FREE "Inventor's Handbook." Send sketch or model for free opinion as to patentability. G. E. Feeney & Co., 27-42L LeDroit Bldg., Washington, D. C.

FARM IMPLEMENTS.

FOR SALE—LOT OF WOVEN HOG WIRE, JOHN Deere manure spreader; nearly new. Twin City 16—30 Tractor and plows. Harold Ketner, Broomfield, Colo.

ARMY GOODS.

SALVAGE AND SURPLUS SALE OF ARMY goods. Denver Army Store, 1443 Larimer St., Denver. Write for price list.

GROCERIES, MEATS, ETC.

SEND FOR OUR WHOLESALE WEEKLY PRICE lists; it will keep you posted on the rock-bottom prices, and will help you save from 25 to 40 per cent on your supplies. Stock Growers Wholesale Supply Co., 1523 19th St., P. O. Box 1442, Denver, Colo.

TIRES.

FORD TIRES, $6.50—EXAMINE AT OUR EXpense. Catalog free. Kiernan & Co., Whitewater, Wis.

BIG MONEY IN THE TIRE PROTECTOR MANufacturing business. Write for particulars. Tire Protector Mfg. Co., Tulsa, Okla.

WATCHMAKING.

BIG BEN, BABY BEN, ANY OLD ALARM, Sometimes balks on the dear old farm. Send it with a dollar to the "Eye Time Store," We'll return it promptly, better than before. 719 Santa Fe Drive. Opticians, Watchmakers, Jewelers.

BUTTER WRAPPERS.

GUARANTEED BETTER BUTTER WRAPPERS— 100, 60c; 250, $1.50; 500, $2.50; 1,000, $4.25, printed to order. Home Specialty Co., Middleton, Idaho.

PATENTS.

PATENTS—BOOKLET FREE. HIGHEST REFerences. Best results. Promptness assured. Send model or drawing for examination and opinion. Watson E. Coleman, Patent Attorney, 624 F St., Washington, D. C.

KODAKS.

LUSTRE PRINTS—NOTHING BETTER FOR KOdak pictures. Sample roll finished for 25c. Free mounting corners with each order. Reed Studio, Norton, Kas.

TANNING.

LET US TAN YOUR HIDE—COW AND HORSE hides for fur coats and robes. Cow and steer hides into harness or sole leather. Catalog on request. The Crosby Frisian Fur Co., Rochester, N. Y.

LAND ATTORNEY.

MRS. MARY WOLFE DARGIN, LAND ATTORney, 1810 Stout St., Denver, ex-Register U. S. Land Office, Denver, will personally answer your land questions. State your question plainly and enclose $1 for reply.

TRAPPERS' POISON.

GOES' LIQUID POISON CAPSULES KILL FUR animals on spot; sixteenth season in market; excellent results; first-class testimonials. Free circular, when mentioning this paper. Edmund Goes, Milwaukee, Wis. Station E.

HONEY.

HONEY—PURE EXTRACTED, 10 LBS. $2, PREpaid inside 600 miles. J. P. Lindahl, Greeley, Colo.

"THEBESTO ROCKY MOUNTAIN HONEY," none better; satisfaction guaranteed or money back; five-pound can, postpaid $1.50. Send remittance with order. Write for price on large quantities. The Colorado Honey Producers Association, Denver, Colo.

ADDITIONAL CLASSIFIED PAGES 18 AND 19.

Maple Shade Farm Polands

WEANLINGS AT $20 EACH.

Pairs and trios not akin. Sires: Peter The Giant, Peter the First, N. C. Ranger. Dams: By Buster of the Clan, Liberator, Emancipator, Ott's Giant. Long Joe.—Bred Gilts Immune, Registered. F. O. B. Sarcoxie, Mo.

W. W. PELSUE, Carthage, Mo. Rt. 3.

THE Cutter LABORATORY — The Name "Cutter's"

on *Serums, Vaccines and Aggressins* signifies, "Made by The Laboratory that Knows How." Twenty-five years of conscientious endeavor in one line count for something.

The Cutter Laboratory

Berkeley (U. S. License) California

FORDS run 34 Miles on Gallon of Gasoline

Wonderful new carburetor. Guaranteed to reduce gasoline bills from one-half to one-third and increase power of motors from 30 to 50%. Start easy in coldest weather.

Sent on 30 DAYS' TRIAL

Fits any car. Attach yourself. Fords make as high as 34 miles to gallon. Other cars show proportionate saving. Send make of car and take advantage of our special 30-day trial offer. Agents Wanted.

AIR FRICTION CARBURETOR CO.

3305 Madison Street Dayton, Ohio

WINDMILL PRICES REDUCED

For the second time this year the prices of the Auto-oiled Aermotor have been reduced. We are glad to give our customers the benefit of the lower costs of raw material, and of every other saving which our enormous output enables us to make. At the present low prices of Aermotor goods there is no reason why anyone should postpone buying. You can now buy an 8-foot Auto-oiled Aermotor and heavy 33-foot tower for $92.00 f. o. b. Chicago. Prices of all other sizes are proportionately low. Why climb a tower to oil an old windmill when the self-oiling Aermotor, which runs for a year with one oiling, can be bought at such low prices?

Write today for Circular **AERMOTOR CO.** Chicago Kansas City Des Moines Minneapolis Oakland

Dairy Business and What the Future May Bring.

(Continued from Page 4.)

from 1,701,000,000 pounds in 1919, which represents the inroads made by the margarine industry. At the same time it is true that our butter production is insufficient for our home needs and that we are again importing butter.

Factory cheese production in 1909 was 311,126,317 pounds. Ten years later it was 412,000,000 pounds. Increased consumption of cheese seems to be a probable development of the coming years. The American people do not appreciate cheese as do the West Europeans. Our consumption is about 4 pounds per capita annually, while the Danes eat 12, the British 10, and the French and Hollanders 8 pounds. Since cheese preserves a larger share of the food value of milk than does butter manufacture, conditions which favor a food economy program should help cheese.

Dairy Conditions in Europe.

Exchange of both butter and cheese between countries declined decidedly, and European countries furnished only about 10 per cent of the cheese imported in Europe and only 50 per cent of the butter. In the case of butter, war rations were in effect in many countries, so that total requirements were greatly reduced. In England only 1 to 1½ ounces a week were allowed up to the end of 1920, or about 4 pounds a year, whereas pre-war consumption was estimated at 18 pounds.

The demand for condensed milk for army use was enormous and European exporting countries only furnished 10 per cent of the amount imported into Europe.

These conditions revived the waning export cheese trade of the United States until 66,000,000 pounds were sent abroad in 1917, butter exports rose to about 25,000,000 pounds, and the condensed milk export balance which in 1913 was 14,696,000 pounds, rose to 836,356,000 pounds in 1919.

The ravages of war caused the destruction of many dairy cattle in France and Belgium, and brought about such a scarcity of foodstuffs that herds were necessarily reduced and the production of the remainder decreased. As a result the supplies available for export were greatly reduced. Denmark's butter surplus decreased from around 200,000,000 pounds to about 80,000,000 pounds, and Holland's cheese surplus decreased from about 150,000,000 pounds to one-fifth of that amount.

Returning to Pre-War Conditions.

During 1920 there were many signs of a return to the pre-war status in the international trade in dairy products. The United States became again a butter importer. Cheese exports were small, forecasting an early return to the importing column, and condensed milk exports decreased over 50 per cent. Europe will struggle back to her feet as a dairy producer, although the drouth during the past summer and shortage of feed for the winter will delay the process till another year. At the same time there will be a gradual return to normal consumption of dairy products abroad. Food restrictions will be removed and economic recovery will slowly restore the buying power of Europeans. Russia will be years in returning to the butter exporting basis where she was in 1913.

Dairymen Can Meet Competition.

In the coming years there is likely to be more or less steady pressure from foreign dairy products, especially butter, and to a lesser extent cheese, to enter our markets. The countries on the other side of the world will not drop out of the struggle for trade without a contest. European countries owe money to our government and will try to pay with goods, among which butter and cheese may figure. Denmark may be able to develop a special butter market here on the score of high quality.

At home, there is an opportunity to increase consumption of dairy products. Also the struggle between the margarine and butter interests will go on. Dairymen must recognize that there are produced in the United States and elsewhere enormous quantities of vegetable oils which are entirely wholesome and which have as much energy value as butterfat, though not the growth-producing value for the young. They can be handled in production and manufactured with less opportunity for contamination than butter. It is inevitable that these oils will be consumed in part as human food.

In brief, the competition from butter substitutes is likely to become more keen rather than less so. To meet it, improvement must be made in the average quality of market butter. It is said that only 5 per cent of creamery butter grades as "extras," only 10 per cent as "good firsts" or better, and 40 per cent falls below a score of 88.

The value of the vitamin content of butter needs constant retelling. Unfortunately, these important but elusive substances can neither be seen, smelled nor tasted, and a moderate deficiency does not lead to an immediate collapse, so that it is not surprising that plenty of people are ready to take the chance if the cheapness of the substitute is an attraction.

Relative Values of Milk Cows.

The chart shows the rise and fall in the value of dairy cows over a period of 50 years. The average price a head, as reported by the United States Department of Agriculture, has been modified by Dun's index numbers of wholesale prices to eliminate variations in the buying power of the dollar. The high and low points show when dairy cows have been either high or low in price compared with other commodities. They do not coincide very closely with the periods of profit and loss in the dairy business, which usually have swings covering shorter periods of time. Obviously, the man who starts in when cows are cheap relative to other commodities is likely to be much better off than the man who acquires his herd when dairy cows are relatively high-priced.

The line in this chart shows a decided upturn in 1921, although dairy cow prices have been and still are declining. Wholesale prices generally, however, have declined even more, so that the value of the dairy cow in terms of other things is higher than it was a year ago.

Combine Beet Growing With Livestock Production.

(Continued from Page 3.)

the community around Ft. Morgan. On the Jewelfield Dairy farm there is one of the best dairy barns in Colorado, also two silos, one of stave construction and the other concrete. They are of 350 tons capacity and about thirty-five acres of corn went into them last fall. The dairy cows are Holstein, purebred and grade. The exceptionally well developed condition of the young heifers is indicative of the value of silage and alfalfa as a ration for growing out dairy heifers into big rugged cows with large capacity for turning feed into milk and butterfat.

Ten acres of cornstalk land will go into beets this year and will be covered with manure. Beets also will go in on a field which produced thirteen tons to the acre under very adverse conditions last year. J. E. Jewell, the owner, stated that he felt sure under favorable conditions the yield would have been eighteen tons to the acre. He is firmly convinced that dairy farming can be worked out much more extensively in this section and become a most profitable adjunct to beet production in bringing larger returns from the farm business as a whole.

E. J. Leonard is another farmer on a small farm near town who believes in the dairy industry and is doing what he can to develop dairy interest and particularly along the line of working out some method of finding an assured profitable outlet for the milk produced. There are two small creameries in operation in Fort Morgan now, one a cooperative. The possibility of enlarging this and developing cheese making as another means of getting milk on the market profitably is being considered. The officials of the sugar company are showing great interest in anything which will tend to make farm production more profitable and particularly along lines that will help make beet growing a permanent industry on a profitable basis in connection with other naturally associated lines.

Income Tax Returns Due.

Income tax returns are due. The last day of grace for the filing of the returns is March 15, and, according to the United States internal revenue officer, Frank M. Howbert, a penalty will be imposed on all who are late in filing returns. "Not more than 50 per cent of the number of returns filed before this time last year have been received," said Howbert.

A well kept farm account book will tell the individual farmer more about what is wrong with his business than all the farm conferences in the world.

Dairying and Hog Raising

All letters regarding commercial and technical features of dairy farming and hog production promptly answered. Address all communications to Dairy Department, Western Farm Life, Denver, Colorado.

Are You Drudge or Scientist?

Too many farmers regard milking cows as drudgery. To the real dairyman milking time is the harvest time, when he can obtain a return for labor invested. The point of view depends on whether the milking barn is a sweat shop or a laboratory, whether the dairyman is a mere drudge or a skilled worker, whether his herd is an eyesore or his pride, his herd bull a sire of which to be proud, or a mere scrub and an abomination. To the drudge, dairying is a gamble, while to the skilled worker who uses his brains as well as his hands it is an interesting and profitable business.

"If the dairyman is a scientist,' says J. E. Dorman, in charge of the western office of the Dairy Division, U. S. Department of Agriculture, "his barn is a laboratory or manufacturing plant, where every cow is a unit that must show efficiency or be eliminated. The science of dairying consists in the study of effects of feeds on the production of cows, and in observing the results of different methods of handling the cows in order to determine the best method for economical production, also in the breeding and development of heifers that are more efficient than their dams, and in the handling of the products so that it will be a pure and safe food.

"The business side of dairying includes the keeping of production records of each cow and her heifers, and cost of production records to check up on the efficiency of the animal as well as on the feed. From the knowledge gained through such records the business dairyman knows the value of his herd sire. He knows whether it pays to grow or buy certain feeds, and how to improve the efficiency of his herd and keep down overhead expenses. It also involves the marketing of the products to get maximum returns and the buying and selling of livestock.

"There is no permanent place in dairying for the man who will not apply scientific and business principles to his herd of cows. Of all branches of agriculture dairying is the most complex and exacting. It requires a high degree of skill, patience and application. Yet no other branch of agriculture can give greater satisfaction and profit if properly managed."

Holstein Wins Milking Contest.

The milking contest at the National Western Stock show this year was won by a Holstein, Medanhurst Lenore, owned by Gray & Leonard, of the Arapahoe Holstein Farm, Denver, with a record of 342.6 pounds of milk and 15.783 pounds of butterfat; no handicap. The test lasted four days and eleven animals of various breeds were entered. Others in the money were: Johanna Colantha Korndyke de Kol 2nd, Holstein, owned by Lee Gaiser, Denver, second, with 281.8 pounds milk and 9.587 pounds butterfat, with a handicap of 25.4 pounds on account of her youth; a Milking Shorthorn owned by the Pine Valley Dairy & Farms Company, Colorado Springs, third, with 319.98 pounds milk and 11.618 pounds butterfat, no handicap; a Holstein owned by Colorado Agricultural college, fourth, with 257.3 pounds milk and 8.267 pounds butterfat, handicap 33.9 pounds.

Sowing Rye in Spring.

Dry land dairymen are hard put for summer pasture for their cows. Even those who have enough short grass pasture find it does not last long enough nor produce enough for a good milk cow to get a day's ration without traveling so much that she has nothing left for milk production. Some farmers in Elbert and Douglas counties have been planting winter rye, either Petgus or Rosen, in the spring. They turn on the stock when the rye is about six inches tall and find that it will carry two animals to the acre for ninety days. Rye planted in the spring will not joint and produce grain as it does normally when planted in the fall. The pure seed of these varieties is scarce and farmers desiring to try this method of getting some summer pasture on dry land should make their plans early. The county agents can be looked to for help in locating seed.

Handling Sows at Farrowing Time.

Proper feeding and handling of brood sows up to farrowing time is half the battle, but it is still possible to lose pigs, sometimes whole litters, because of faulty practices at this time. It is not safe to depend on straw stacks, manure piles, or any old place the sow may hunt out for herself when farrowing time arrives. Elaborate quarters are not necessary, but each sow should have a well sheltered pen 6x8 or 7x7 feet, with a small quantity of dry bedding for the nest. Everything should be thoroughly clean for many of the baby pig's ills are contracted from the filth in its quarters. Placing a guard rail around the pen 8 or 9 inches from the floor will nearly always mean the saving of a pig or two, particularly with gilts. These rails should be nailed solidly in place. Their purpose is to permit the young pig caught at the sow's back as she lies down to slip under the rail instead of being crushed against the wall.

The man who wants to be extra good to his sows is nearly always tempted to feed too much at farrowing time and while the pigs are young. Nothing at all but water for the first twenty-four hours should be the rule. A very little bran may be added to the water. Very little feed should be given the first two or three days, and it should be of a cooling and laxative nature.

Increase the feed very gradually. Heavy feeding stimulates the production of more milk than the pigs need and trouble will follow. By the time the pigs are two weeks old the sows usually can be fed all they will eat and there is no cheaper way to put gain on a young pig than to feed the sow enough of the proper geeds so she will have an abundance of milk for the pigs. Plenty of fresh clean water is as essential as good feed.

With the present outlook in the hog market the man with a few good sows bringing pigs now may consider himself fortunate and it would be poor policy to losé part of his pigs through lack of proper attention at farrowing time and while the pigs are young.

Pasture for Dairy Cows.

At no other time of the year and under no other conditions do dairy cattle produce butterfat and milk so cheaply as during the pasture season. This is always looked forward to as a time of cheap and efficient production. The great difficulty is the scarcity of pasture. The day of the wild pasture has gone forever in the irrigated sections and as yet there are far too few good tame pastures established. Dairymen are beginning to feel the need of pastures and many are wondering whether they cannot have good pastures suitable for carrying enough cows to make it pay.

A good pasture should carry from one and a half to two animals to the acre. There is no reason whatever why pastures capable of carrying that many and more cannot be established and kept up, in fact, made to become more productive from year to year under proper management. D. Warnock & Son of Larimer county have a twenty-five acre tame pasture which carries three animals to the acre. R. G. Maxwell of the same county has a pasture which was first seeded twenty-one years ago this spring and it seems to be getting better every year. Chas. V. Owens seeded six acres three years ago in April and the same summer run twenty-six mature animals on it. Others could be mentioned who have proven in

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Before churning add one-half teaspoonful to each gallon of cream and out of your churn comes butter of Golden June shade to bring you top prices. "Dandelion Butter Color" costs nothing because each ounce used adds ounce of weight to butter. Large bottles cost only 35 cents at drug or grocery stores. Purely vegetable, harmless, meets all State and National food laws. Used for 50 years by all large creameries. Doesn't color buttermilk. Absolutely tasteless.
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Outfits for Getting Water Anywhere

Earth augers, rock drills and combined machines. Engine or horse power. *Write for easy terms and free catalog.*

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Full set Army steel letters and figures. $1.00.
15 acres army goods. Illustrated catalog for 1922 -532 pages--including full and highly interesting information (specially secured) of all World War small arms, mailed 50 cents. Circular 18 pages 10 cents. Established 1865.

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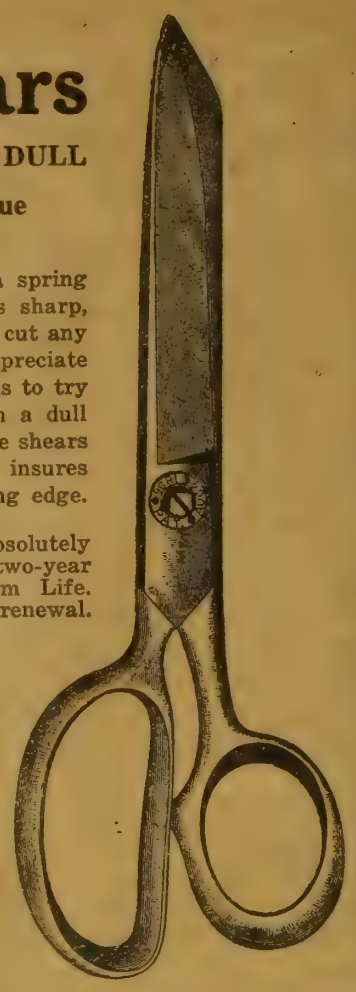
Will cut anything from wet tissue to the heaviest cloth.

This high-grade shear is equipped with a spring tension attachment that keeps them always sharp, and also makes it possible to adjust them to cut any kind of material. Every housewife will appreciate this feature as she knows how annoying it is to try to cut out different kinds of materials with a dull pair of shears that cannot be adjusted. These shears are made of the best carbon steel, which insures strength, and an "always sharp" keen cutting edge.



Free a pair of these shears given absolutely FREE, postage paid, with a two-year subscription to Western Farm Life. Subscription may be new or renewal.

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Western Farm Life, Denver, Colo.:

Gentlemen—Enclosed herewith find $1.00 for which please renew my / send me } WESTERN FARM LIFE for two years, and send me, postage paid, the 8inch Tension Shears.

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their farm practice that the best of tame pasture can be established. The agricultural college mixture is the one now most commonly used in starting a tame pasture. It is as follows:

Orchard grass, 15 pounds; awnless brome grass, 15 pounds; meadow fescue, 10 pounds; timothy, 6 pounds; yellow sweet clover, 4 pounds. On low-lying wet soils reduce the orchard grass, adding more timothy and some redtop. Heavy seeding is necessary to get a heavy sod established early. A perfect stand is required to make a satisfactory pasture, therefore it will pay to give careful attention to the preparation of the seedbed and the details of seeding. The college recommends seeding with a light cover crop to be removed as soon as cut. It also advises cutting for hay the second season, deferring pasturing until the grasses are well sodded before turning in the stock. Hogs and horses can safely be pastured on alfalfa. In the higher altitudes timothy and alsike clover make a good pasture mixture.

There is no better time than when grain and other feed crops are low in price to put some land down to grass. During the war period many acres of productive grass land were plowed up to grow grain. This has created a shortage of pasture all over the Mississippi valley states where grass had become a very important factor in producing livestock and livestock products cheaply. The farmer in an irrigated country can establish a tame pasture much more easily than the farmers who have to depend upon the rainfall in getting a start. It is simply necessary to learn what grasses to plant, just what methods of preparation are best and how to get dependable seed. Getting worn land into grass is nature's most effective way to restore such lands to virgin condition. Developing pastures is a fundamental soil building principle in farming practice which must eventually be worked out in every farming section where it is at all feasible. In Larimer and Weld counties there are already enough tame pastures to convince the most skeptical that profitable pastures are practical. The county agents are offering to help in locating seed, having it tested for germination and give the details of the best practices which have been tried out in getting pastures started. It is none too early to begin making the necessary preparations to seed down some land to grass.

Three cents worth of labor and materials per acre used in spraying oat seed for smut will bring an increase of three bushels of oats per acre.

Better seed makes bigger crops.

Inject Hogs in Flank.

The old method of injecting hogs in the ham or shoulder for cholera prevention has been in disfavor for several years. Complaints from killers are still being made, however, that the practice has not been changed by many who immunize hogs against cholera. Infection frequently follows injection of serum resulting in deep abscesses in the hams and shoulders which reduces the meat value of the valuable parts of the carcass. The United States Department of Agriculture has long advised injecting the serum in the flank or between the front legs, where there is loose connective tissue that readily absorbs serum.

In making an axillary injection the front legs should be spread apart so as to stretch the superficial muscles between the legs, and the needle should be directed so as to avoid the muscles of the shoulder.

It is desirable to make the injections at a point that will make drainage easy should an abscess form. Serum should never be injected into a mass of fatty tissue, as it is not sufficiently absorptive. Although the serous membrance lining in the abdominal cavity takes up serum readily, abdominal injections are not recommended because of the danger of puncturing the internal organs with the needle or of carrying infection into the cavity.

Small pigs and shoats up to 80 pounds in weight may be held up by the hind legs, with the forefeet resting on the ground, and the injection made into the loose tissue of the flank. A pig so held is in a good position for the taking of temperature, cleansing the area of operation, and making the injection. Farmers' Bulletin 834, which has been recently reprinted, contains full information regarding hog cholera and the methods of control.

Learn How to Feed Milk Cows.

How to feed milk cows in order to obtain maximum profits will be a feature of the discussions at the "Dairy Day" meetings being put on by the Colorado & Southern railroad in cooperation with the Colorado Agricultural college and the Colorado Dairy council. Milk cows can not produce profitably unless fed properly. Beginners in dairying frequently fail in getting the most out of their cows because they do not understand how to combine the feeds they have or how to buy feeds that are the most enonomical milk producers. It is possible for one man to obtain a profit from a herd of cows while another with cows of equal capacity will lose money because of failure to follow proper feeding and handling methods. It is always in the interests of economical production to use farm-grown feeds to the fullest extent possible. But sometimes knowledge of how to combine these feeds and the relative qualities of the different kinds to use makes the difference between success and failure.

How to mix and combine the various feeds available into the best sort of rations for economical production will be explained at the dairy meetings. There will be exhibits showing the different kinds of farm feeds as well as ground grains and various commercial feeds, the displays showing their relative values as cow feeds.

The various feeding problems will be discussed by practical men who have had both training and experience in the care and feeding of dairy cattle. The Dairy Day meetings for the last two weeks of the schedule are as follows:

Trinidad, Colo., March 1; Branson, Colo., March 2; Des Moines, N. M., March 3; Grenville, N. M., March 4; Clayton, N. M., March 6; Mt. Dora, N. M., March 7; Texline, Tex., March 8; Berthoud, Colo., March 13; Loveland, Colo., March 14; Fort Collins, Colo., March 15; Wellington, Colo., March 16.

Poland China Futurity Show.

Breeders of Poland China hogs desiring to compete in the Futurity show at the 1922 Colorado State fair must make their nominations to the Poland China breed promotion committee, Peoria, Ill., by March 15. The initial fee is $5 and according to the plan worked out there must be not less than twenty herds nominated. A prize classification of $600 has been announced for this show by J. L. Beamen, secretary of the State Fair board, who has just completed the arrangements with the Poland China breed committee. This, with the regular open class money and that open to the boys' and girls' pig clubs, will bring the Poland China money at the 1922 fair to $1,100.

Breeders in adjoining states where there will be no futurity are eligible to enter the Colorado Futurity show, provided they nominate their herds. Animals entered for the Futurity show are also eligible to the open classes. In the junior pig classification the first money will be $25 each on boar, sow, and litters of four, with eight prizes in each classification. In the senior pig classification the same money is offered.

There is more than usual interest in purebred hogs in this section as a result of the showing made at the International Livestock Exposition in Chicago last fall, where the grand champion Poland China boar was shown by the Colorado Agricultural college. The reserve grand champion Poland China boar and the reserve champion sow also were exhibited by the Colorado Agricultural college, and the college won first in the heavy carcass over all breeds with a barrow which was fitted at the institution.

Colorado Holsteins Win.

A Holstein from Colorado topped the sale at the Kansas National Stock show in Wichita, bringing $435. This cow was from the American Beet Sugar company's Lamar herd. Among the 200 Holsteins entered in this show 24 were from Colorado, the exhibits being from the Penrose herd at Colorado Springs, from the Model Dairy herd of Holly, and the American Beet Sugar company's herd. The Colorado exhibitors won two first prizes, two seconds, three thirds, two fourths and one fifth.

The Arthur Waechter Sale.

The farmers and breeders of Eastern Colorado seem to appreciate the offering of bred sows made by Arthur Waechter at his public sale held at his farm near Yuma, Colo., February 15. No sensational sales were made, but the average price was good. The top sale was made to C. M. Walker, Yuma, Colo., who paid $80 for the outstanding bred sow. There were forty-seven head sold, the sale average was $50.50 per head, with the sale making a grand total of $2,391.00.

The following are the purchasers of sows selling for $57.50 or more: Ira Chandler, Yuma, Colo., $60.

A. P. West, Yuma, Colo., $60.
A. P. West, Yuma, Colo., $57.50.
C. M. Walker, Yuma, Colo., $80.
G. C. Chapman, Wages, Colo., $60.
William Staum, Burdette, Colo., $60.
E. D. Beale, Eckley, Colo., $57.50.
J. W. Warriner, Vernon, Colo., $70.

Forest Fail and Carrol Flack, Yuma, Colo., $57.50.

J. R. Highland, Akron, Colo., $62.50.
R. R. Highland, Akron, Colo., $65.

It was an even, snappy sale from start to finish, buyers showing their appreciation at all times of the quality offered. While several of the animals should have brought more money, prices were very satisfactory if one takes into consideration present financial conditions and the experience that many breeders have had in holding public sales of purebred livestock the past eighteen months. Col. C. W. Snook was auctioneer, assisted by local auctioneers.

Spotted Poland China Sale.

On March 9, R. B. Stone & Sons, Nehawka, Neb., will sell at public auction fifty head of their purebred Spotted Poland China hogs. Spotted Poland Chinas are becoming quite popular in many eastern sections and also a number of breeders in Colorado and adjacent territory. We would suggest that readers of Western Farm Life who are interested in Spotted Poland Chinas write R. B. Stone & Sons for their sales catalog.

A Correction.

In our issue of February 1, the report of the Holstein division of the Western Stock Show, we stated that in the senior yearling bull class the Modern Woodmen Sanatorium won first with King Pontiac Parthenia. This was an error. The Sanatorium won first with their bull Columbine Chiron Changeling, and not with the Parthenia bull. The Changeling bull was bred by the Spencer Penrose Turkey Creek Farm, and bought by the Modern Woodmen Sanatorium when a calf.

Home-grown corn of acclimated varieties will produce higher yields than imported seed.

IN THE NEXT ISSUE

Getting a Profitable Start in Hogs

"The best way to sell alfalfa is to put legs on it and sell it through hogs," writes a farmer hog-raiser to Western Farm Life.

In the March 15 issue will be featured prize winning letters from hog raisers telling their personal experiences in getting a start and making a permanent and profitable business out of raising hogs. There is money in hogs for the irrigation farmer, the plains farmer and the ranchman. Watch the next issue and see what your neighbor has to say about hog raising.

Special Features in Current Number

What Shall We Plant as Emergency Crops This Year?
Market Outlook for Farm and Ranch Products.
Dairy Business and What the Future May Bring.
Seventeen Consolidated Schools in El Paso County.
Combine Beet Growing With Livestock Production.
From the Nation's Capital.
A Bean Shortage Looms Ahead.
Kill Off the Prairie Dogs.
Profitable Farm Poultry.
The Rural Household.
Dairying and Hog Raising.

TO OUR READERS—Western Farm Life now has a circulation of 55,000, a gain of 10,000 in the past eighteen months. There are 60,000 rural homes in the state of Colorado. We have 20,112 as regular subscribers. Among the 15,611 rural homes in Wyoming, we have 5,153 subscribers. Utah has 25,664 rural homes, we have 8,763 subscribers. In Southeastern Idaho there are 15,000 rural homes and we have 5,124 subscribers. In other words, one-third of your neighbors, like you, are taking Western Farm Life.

We want you subscribers of Western Farm Life to help us get one-half of your neighbors to taking Western Farm Life. You can do this by passing along your copy to a neighbor when you are through with it. Do this and tell him of the many good things you find in it each issue. Western Farm Life is the only agricultural magazine in the country published solely for the farmer and stockman of this territory. The subscription price is 50c per year. A subscriber writes us. "There is at least one article in each issue that is worth a year's subscription in dollars and cents to any western farmer or stockman."

HAMPSHIRE HOGS.

FOUR YEARS THE BEST

The International Livestock Show is the test of hog producing power. Hampshires have won the grand championship in this test four years in succession—1918, 1919, 1920, 1921—in the hands of average farmers. No experts needed to make Hampshires win.

Hampshires are the greatest of all forage hogs, making the highest-priced pork out of the cheapest feeds on the farm. Active, vigorous and healthy, they raise exceptionally large litters. At the International they have shown, almost without exception, the heaviest spring pigs of any breed, carrying always the heavy, high killing, lean meat type. For free Hampshire information and for names of breeders in your neighborhood, address

Meat Type Hampshires

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CLOVERDALE RANCH HAMPSHIRE HOGS

EARLY MATURING MARKET TOPPERS

Pay Dividends on the Investment. Only a small percentage of our fall litters were saved for breeding purposes, but they are extra good ones—well grown out. Inquiry for Hampshires is good and sales are increasing every week. Our hogs have been shipped into four different Rocky Mountain states this winter. Have only a few gilts left that are bred for spring farrow, and one or two choice young boars. Write us your wants today. Prompt delivery and satisfaction guaranteed.

N. E. MOSHER & SON, HUGO, COLO.

PUREBRED HAMPSHIRES

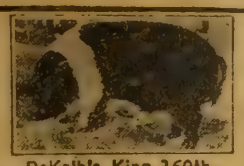
My Hampshire herd is the same blood lines that made such remarkable records at the Des Moines, Ia., and Lincoln, Neb., state fairs in 1919. I am now offering sows and gilts bred for March and April farrow. Also some choice September pigs. Write me.

P. P. CEDER, GENOA, NEB.

PUREBRED

Hampshires

by Grand Champion sires and dams. Breeding stock for sale.



DeKalb's King 160th.

C. S. BRATT & SON, ARAPAHOE, NEB.

DUROCS.

DUROCS

Gilts bred to my champion boars and June pigs from my great yearling "Golden Chief" and a daughter of the World's Grand Champion, Great Orion Sensation, can be seen at the Stock Show.

J. W. Brauer,

22 Lorraine St., Colorado Springs, Colo.

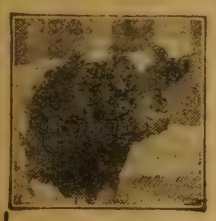
SPRING BOARS

Just a few real herd headers left ready to go at pre-war prices. Used with grade sows even, they will more than pay for themselves on the first crop of pigs. Write today.

C. C. Boyd, Yuma, Colo.

Livestock Auctioneer and Duroc Breeder.

SHORTHORNS.



TOPS CHICAGO MARKET FOR 1921

Sixty-two Shorthorn steers, yearlings, weighing 1101 lbs., made the high price of the year at the Chicago market, $11.50 in October, fed by Brown Hitt, New Berlin, Ill. They weighed 448 when placed on feed in November and gained 653 lbs., two pounds per day, in 11 months. Some gain! Some quality! Some profit!

American Shorthorn Breeders' Association, 13 Dexter Park Ave. Chicago, Ill.

SUNNYSIDE ROBERT

SHORTHORNS

We have for sale cows, and cows with calves by side, and heifers. Scotch and Scotch tops. A few choice bulls left. We make 'em make good. Write us.

GLEASON & BLAZER, Kiowa, Colo

POLAND CHINAS.

SPOTTED POLAND CHINAS

50 Head of Bred Spotted Poland China Sows 50

At Auction, March 9th

Bred to the Greatest of the Breed.

Write for Catalogue, giving full details.

R. B. Stone & Sons,

NEHAWKA, NEBRASKA

Mather's Big-Type Polands

sold to breeders in four states this year are giving satisfaction.

BUY WEANLING PIGS

at prices that will surprise you.

C. J. Mather, Longmont, Colo.

BIG TYPE

Poland China Pigs

SIRED BY F. B's LONG BOB.

White Leghorn Eggs, $2 per setting, $7 per 100; and Mammoth Bronze Turkeys.

F. B. MORGER,

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HEREFORDS.

THE MARKET LOOKS PROMISING. RESTOCK NOW WITH

HEREFORDS

Some choice heifer calves and a few bulls of Beau Santos and Bright Stanway breeding are for sale.

J. D. Craighead, La Junta, Colo.

D. S. Polled Herefords

Cows from Polled Plato, herd headed by POLLED SUCCESS A 3rd. Young bulls and heifers for sale.

Smith Livestock Co.

CHIVINGTON, COLO.

SHADELAND STOCK FARM

BREEDERS OF

SHORTHORN CATTLE

Herd headed by Maxwalton Rustler, a grandson of Avondale.

Chester White hogs of best breeding stock for sale. Also Ringlet Barred Rock eggs for hatching. G. W. BALL & SONS, Pierce, Colo.

SHORTHORN BULL FOR SALE.

ADVOCATES URR, roan, calved Sept., 1919. Bred by H. F. Harmon. Sire, Imp. Advocates Model 647679. Dam, Maid Marian 138615; sire, Gladstone 239313. Dam, Merry Maid 2d 29528; dam, Nonpareil Victor 2d 258255. Dam, Merry Maid 72d; sire, March Knight 188105. Dam, Imp. Winsome Maid; sire, Marchison 192330.

H. F. HARMON, BOULDER, COLO.

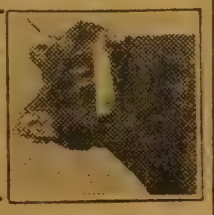
GUERNSEYS.

GUERNSEYS

Sired by the Grand Champion bull at the 1921 National Western and State Fair, both male and female, are for sale. Write

H. D. PARKER

GREELEY, COLO.



MILKING SHORTHORNS.

Milking Shorthorns

10 registered cows that will freshen this spring. All good cows and have been hand-milked. Priced from $100 to $125.

10 head yearling heifers, hand-raised on the bucket. Priced from $50 to $75.

8 young bulls, ready for service this spring. Priced at $75.

Several young bulls and heifer calves. Priced from $35 to $50.

My cows are all range raised and rustled their living until freshened the first time, so are not as large as they should be, but several have milked over 1,000 lbs. a month without special care. The young heifers have all been hand-raised and should make a nice bunch of cows.—Remember, all this stuff offered for sale is registered and should move quickly at the prices quoted. Write me your wants.

OTTO RAMSTETTER, GOLDEN, COLO.

PRIZE WINNERS

Shorthorns, Herefords, Guernseys, Holsteins, Jerseys, Poland Chinas, Duroc Jerseys, Including Grand Champion Poland China Boar.

Colorado Agricultural College, Ft. Collins, Colo.

Buy Your Foundation Now

In Purebred Livestock from a big organization that spares no money to buy the best and specializes on purebred registered

Herefords *Percherons*
Holsteins *Duroc-Jerseys*

Breeding stock of all ages for sale. Individual or carload lots.

MYRON STRATTON HOME FARMS,

James J. Gauld, Supt. COLORADO SPRINGS, COLO.

General B.

MILKING SHORTHORNS.

PRIZES

TAKEN BY THE

WYLDEMERE FARM Milking Shorthorn Herd

AT THE WESTERN STOCK SHOW, DENVER, 1922.

2nd Prize Royal Glenside.....Aged Bull.

1st Prize Calf Herd.....
1st Prize Get of Sire..... } The Get of
1st Prize Young Herd..... } Royal Glenside
1st Prize Produce of Dam...

1st Prize Yearling Bull.....
1st Junior Champion .....
1st Reserve Grand Champion.. } The Get of
1st Prize Junior Bull Calf . } Royal Glenside
1st Prize Senior Bull Calf...

1st Prize Senior Heifer Calf.
1st Junior Champion Female.
1st Grand Champion Female.
2nd Prize Two-Year-Old Heifer.
4th Prize Two-Year-Old Heifer.
4th Prize Senior Yearling Heifer.
2nd Prize Junior Yearling Heifer.
3rd Prize Junior Yearling Heifer.
4th Prize Junior Heifer Calf.

J. B. BENEDICT

Owner and Breeder.

Littleton, Colorado.

JOE GOETZFRIED, Herdsman.

NOTHING FOR SALE AT PRESENT.

Shorthorns That Milk

ARE MONEY MAKERS.

A herd that will give you a good monthly cash income is what you will need in the future. One of our young bulls from a Record of Merit cow can develop your herd into a dual-purpose paying proposition.

We know the war is over and have bulls for sale at prices that you farmers and ranchmen can afford to buy. Write for our bargain list and easy payment plan.

We also have several young bulls for sale, priced to sell.

THE PINE VALLEY DAIRY & FARMS CO.

Seeley G. Rose, Mgr. Colorado Springs, Colo.

Bates Shorthorns

are the foundation blood of true Milking Shorthorns. We have them. A few bulls to sale.

THE CARPENTER CATTLE CO.

GREELEY, COLORADO

Buy MILKING SHORTHORNS

from the oldest established herd in the state.

We can supply your needs in bulls of beef type either horned or polled Shorthorns.

Write Superintendent for folder on breeding and prices.

State Industrial School,

Golden, Colo.

MILKING SHORTHORNS

All Cows in Milk Officially Tested.

Service bulls of World's Record breeding. Both males and females for sale. Personal inspection invited. Send for Illustrated Booklet.

THE BONVUE FARMS CO.,

Stockyards, Denver, Colo.

HOLSTEINS.

Only One Bull Left

Just one bull of serviceable age is left for sale in our herd. His dam made 15 pounds of butter as a yearling and will be tested for year's work this fall. She is a wonderful milker and the daughter of a 4-year-old with a year record of 25,208 pounds of milk and 878 pounds of butter, while the granddam of the bull's dam milked 108 pounds of milk in one day and 3,100 in 30 days. Two direct generations of 100 pound cows back of him. He is a good individual, mostly white, and sired by Denver Sir Segis, a 30-pound son of our senior herd sire, Johan Duchess De Kol Lad. What will this bull be worth to some good breeder?

Sanborn Meadows Holsteins.

MRS. R. G. DOUGLAS,

Rush P. O., Colo.

4 Registered Holstein Bulls

FOR SALE—One 3-year-old, three 2-year olds. Three are direct descendants of Pontiac Korndyke 25982, and the fourth carries Dirkie, DeKol, Aaggie and Nemea strains. For further information address

THE NILES FARMS,

706 Kittredge Bldg. Denver, Colo.

We have bred hundreds of prize-winning and high-producing Holstein cows, including

Tilly Alcartra

We can supply you with that same line of breeding. Write

McKAY BROS., Caddoa, Colo.

WALLIE FARM REGISTERED HOLSTEINS.

4800 S. Penn, Denver. W. G. Foster, Owner

Home of "Colorado Count," whose 29 sisters broke 140 world's records.

Bulls of Serviceable Age for Sale

Excellent individuals. World's record blood. Terms to responsible buyers. Wallie Farm bulls are guaranteed.

PRODUCTION

TYPE SIZE

We offer you a wonderful amount of these Holstein qualities—and from a clean herd. Bull calves from fine record dams. Pahgre Valley Ranch, Loesch Bros., Montrose, Colo.

BREEDING

Buy a Calf Out of This Herd

Twenty cows in this herd on an official seven-day test averaged 440.13 lbs. of milk and 20.19 lbs. of butter.

COLORADO STATE HOME,

2305 S. Wash. St. Denver, Colo.

D'ARCY HOLSTEINS

Have made good at home and they will do the same for you. A few choice cows to be purchased now at a price that can't help but make you money. Write

NORMAN R. D'ARCY

Parker, Colo.

GREAT BARGAINS. 960 HEAD HEREFORDS, SHORTHORNS, ABERDEEN ANGUS

1, 2, 3, 4 and 5 years old. Cows, heifers and bulls. Prices $75 to $120 and up. 360 Percheron and Belgian horses, stallions, mares and colts, 1 to 6 years old. Prices $2[illegible] up per head. One head or a carlot. Breeding guarantees with each. Registered pedigrees mailed. Stock on twenty farms in Iowa and Illinois. Write for circular and [illegible]

Address ILLINOIS HORSE & CATTLE CO., Good Block, Des Moines, Iowa.

Prices Cut For Quick Clearance!

We Challenge the World to Equal These Values

Brand New Standard Tires

Factory Prices

6,000 MILES GUARANTEED

Astounding cut in tire prices. All brand new factory firsts, not reconstructed or seconds, but perfect condition tires guaranteed to give 6,000 miles or credit allowed for unused mileage. Remember these are standard quality tires. Compare our prices with others.

SIZES AND PRICES

Order No.	Size	Tread	Price
10	30x3	Non-Skid	$ 7.45
11	30x3½	Non-Skid	8.45
12	32x3½	Non-Skid	12.45
13	31x4	Non-Skid	13.45
14	32x4	Non-Skid	14.95
15	33x4	Non-Skid	15.95
16	34x4	Non-Skid	16.95

Delivery charges added to C. O. D.

MEN'S WORK SHOE

Dark Brown Color

Sizes 6 to 11 Order No. 186.

$1.98

plus postage on arrival

A sturdy work shoe with heavy, long wearing upper stock, double leather insoles and guaranteed counters. Made especially for the modern farmer, with uppers tanned to resist acids. Guaranteed to please or your money back. Don't send one cent. Pay postman when you get the shoes.

MEN'S FINE DRESS SHOES

Black or Brown

English or Blucher Style

$2.98 Plus Postage on arrival

Sizes 6 to 11. Order No. 107

A fine lot of men's dress shoes, values up to $5 and $6, sacrificed at $2.98. In Brown or Black and in Blucher or English styles. Be sure to mention color and style as well as size. Remember you can examine these shoes and if not pleased you can return them for refund. You risk nothing. Be sure to include these in your order.

LADIES' JULIET

SIZES 3 TO 8 Order No. 229

$1.78

Plus Postage on arrival

Ladies' fine kid-finished house shoes with rubber heels and flexible soles. Don't fail to get in on this big bargain at only $1.78. Your money back if not satisfied.

LADIES' 1-STRAP

$1.49

Plus Postage on arrival. Order No. 218.

Sizes 3 to 8

Ladies' easy, comfortable kid finished one-strap slippers. One of the best bargains ever offered.

Don't Send A Single Penny

Values such as you have never seen before, many of them even better than pre-war prices. Any merchandise from this page will be sent direct to your home without a penny in advance. Just pay postman when the goods arrive. We positively guarantee you a big saving and will gladly refund money plus postage charges if you are not fully satisfied with your purchase. But order at once! Bargains like these will soon be sold.

Ladies' English Walking Boot

Half price while they last. Black color No. 923

$1.98

plus postage on arrival. Sizes 2½ to 8. Same shoe in dark brown, No. 925

$2.49 plus postage on arrival

Here we beat every bargain price ever offered, even before the war. Think of it! A ladies' boot at $1.98. And it is a strongly made boot with lots of wear in every pair. Only a limited quantity. When these are gone we can get no more at this price. Order yours at once at $1.98, brown, $2.49.

HIP BOOTS

$2.69

plus postage on arrival

Sizes 6 to 12

Order No. 173

Absolute first quality hip boots at less than cost to manufacture. Order at once while we still have them in stock.

GIRLS' SCHOOL SHOE

No. 462

Sizes 8½ to 11

$1.75 Plus postage on arrival

No. 464 Sizes 11½ to 2..... $1.98

No. 264 Sizes 2½ to 8..... $2.49

Shoes for healthy, active girls, made to stand the hardest wear. We guarantee them to wear. They are constructed of neat, gun-metal leather on a very stylish last. Don't send a penny! Pay when the shoes arrive.

Boy's School Shoe

No. 301 Sizes 9 to 13½..... $1.98

Plus postage on arrival

No. 302 Sizes 1 to 5½..... $2.49

Splendid, sturdy school shoes for husky growing boys. Buy these shoes for your boys and get your full money's worth in wear. Neat appearing, gun-metal leather, as good for Sunday as everyday. Money refunded if not satisfactory.

Outing Shoe Sensation!

Mens Sizes, 6 to 12

No. 102

$1.88

plus postage on arrival Boy's sizes 1 to 5½

No. 314

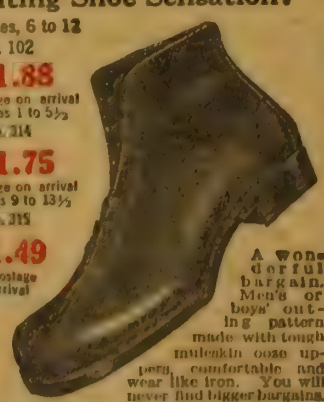
$1.75

plus postage on arrival Boys' sizes 9 to 13½

No. 315

$1.49

plus postage on arrival

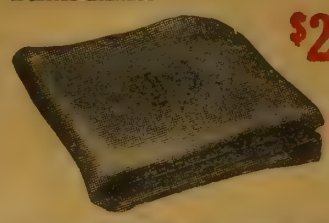


A wonderful bargain. Men's or boys' outing pattern made with tough muleskin ooze uppers, comfortable and wear like iron. You will never find bigger bargains. Order these at once.

U. S. Army Wool Blankets

Regular O. D. Khaki Color, All-Wool

A $10.00 Blanket

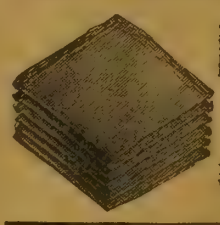


$2.98 plus postage on arrival

Order No. 3200

The most sensational bargain yet in army goods. Guaranteed perfect condition Khaki color O. D. all wool U. S. army blankets, all full size, 66x84. Send in your orders at once. Be sure you get several at this big bargain price.

ARMY HANDKERCHIEFS



Regular Khaki color handkerchiefs, look like pongee. While they last, 6 handkerchiefs

39c

Be sure to include some with your order.

No. 3300.

OFFICERS' $7 SHOE

$3.98

plus postage on arrival

These army officers' shoes are now being sold by others at $6.00 and $7.00. They are all Goodyear stitched soles and are one of the very best made shoes for dress and everyday wear.

Sizes 6 to 11 Order No. 191

Genuine Kid Comfort Oxford

No. 1217

$1.79

plus postage on arrival

Sizes 3 to 9

We challenge all competition on this number. A genuine kid comfort oxford made with low heel and a wide roomy toe. Order now! These oxfords will go quickly at this greatly reduced price.

Ladies' Comfort Shoes

Sizes 3 to 8

Order No. 233

$2.19 plus postage on arrival

Made of fine, soft kid-finished leather with rubber heel and flexible soles. Many women with foot trouble have found instant relief in these shoes. Don't send one penny. Just pay when the shoes arrive. Your money back at once if not satisfied.

FOR THE KIDDIES

Sizes 3 to 8

No. 460

$1.25 Plus postage on arrival

These shoes would be a bargain at $2. They are soft kid leather and have a flexible durable sole. Will give the children a surprising amount of wear.

$6 Waterproof Work Coat

While they last

$1.98

plus postage on arrival

Order No. 3100

There are just 6,000 of these coats and we are closing out the entire lot at the ridiculously low price of 1.98. They are made of extra strong waterproof material and are fleece-lined, have a full five-inch facing and large, roomy pockets. They are really a good value at $5 or $6. Rush your order in. If you don't find them all we claim we will gladly refund every penny.

ALL-RUBBER ARCTICS

Half Price

$1.69

plus postage on arrival

Order No. 179

Sizes, 8 to 13 only

Positively the greatest arctic bargain in the country. If you can wear any size from 8 to 13 you can get a pair of these brand new arctics at actually less than half price. They are all brand new, first quality waterproof, four-buckle arctics.

We want to close out our stock of these arctics, hence this ridiculously low price.

Ladies' Ball Strap Model

$2.98

Plus postage on arrival

Sizes 2½ to 8

Order No. 277

DARK BROWN COLOR

The very latest style, ladies' ball-strap with medallion tip in a rich dark brown shade. Very popular in the cities where these styles sell for from $6 to $8. Made of durable upper stock and has natural finish sole which insures the greatest wear.

Order a pair at our risk. We will gladly refund your money. If you are not more than pleased with this graceful and stylish model.

BALL STRAP OXFORD

$2.79 plus postage on arrival

Order No. 1208

Sizes 2½ to 8

The very latest and most attractive style in low cuts offered this year. A beautiful Havana brown color in ball strap design, medallion tip and rubber heel. A startling value at $2.79.

GENUINE KID OXFORD

$2.49 Black No. 1200 Brown No. 1201

plus postage on arrival

Sizes 2½ to 8.

We offer you style and comfort in these genuine Kid oxfords. At $2.49 they are an astounding bargain. State whether you wish medium heel or low walking heel and black or brown color. Order now! They will go fast at this bargain price.

SATISFACTION GUARANTEED! We don't want our customers to risk one cent. Send us your order without a penny in advance. Pay postman when the goods arrive. Then if not satisfied after examination you may return them and get back every cent including postage. Order at once! Bargains like these won't last long.

GORDON BATES SHOE CO.

DEPARTMENT V, MINNEAPOLIS, MINN.

Need More Brood Sows and Pigs on Our Farms—Page 3

WESTERN Farm Life

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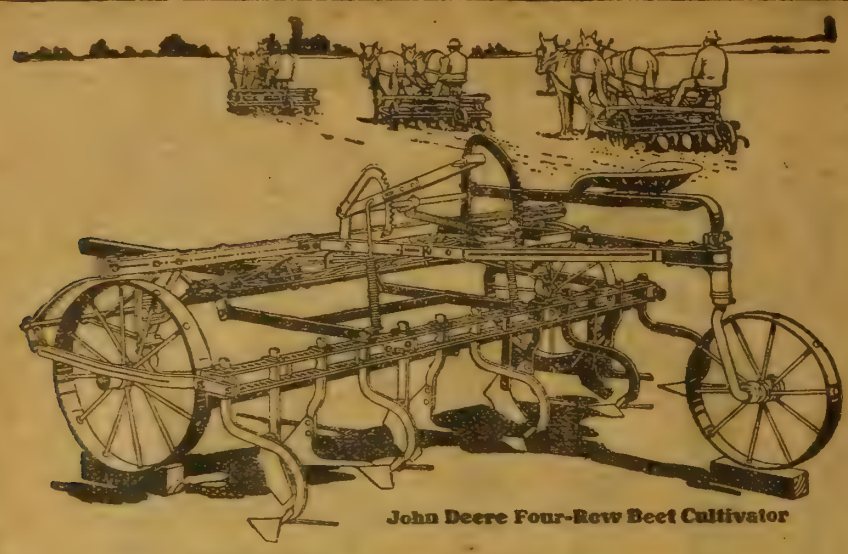
MAR 28 1922

Vol. XXIV. Denver, Colorado, March 15, 1922. Semi-Monthly



John Deere Four-Row Beet Cultivator

Cultivates Beets Under All Conditions

No matter whether you have to use weeding knives, disc weeders, duck feet, bull tongues, irrigating shovels, or any other type of tools in cultivating your beets, you can do the work successfully with

JOHN DEERE BEET AND BEAN CULTIVATORS

JOHN DEERE BEET AND BEAN TOOLS

2, 3 and 4-row planters.
2, 3 and 4-row cultivators.
Pullers.
Lifters.
Gear.
Elevators.
Also plows and harrows for preparing the seed bed.

Easy to change the tools and the distance between rows on John Deere beet and bean cultivators—not even a wrench is required. On the two-row walking and three and four-row riding cultivators, slots are provided one inch apart, entire length of tool bar. Slip the tools through the desired slots and drop the clamps into position. A complete set of tools can be assembled on the tool bar in from two to five minutes—and we can furnish the type of cultivating tool you require.

Quick dodge on crooked rows—a push of the foot makes the tools dodge as desired and a powerful spring causes them to return to normal line of draft after dodging.

Complete equipment—a John Deere tool for every operation in preparing seed bed, planting, cultivating, harvesting and hauling your beets.

Write us today. Address John Deere, Moline, Ill., for free booklet describing John Deere Beet Cultivators. Ask for Booklet BT-849.

JOHN DEERE

THE TRADE MARK OF QUALITY MADE FAMOUS BY GOOD IMPLEMENTS

Western Canada Offers Health and Wealth

and has brought contentment and happiness to thousands of home seekers and their families who have settled on her FREE homesteads or bought land at attractive prices. They have established their own homes and secured prosperity and independence.

In the great grain-growing sections of the prairie provinces there is still to be had **on easy terms**

Fertile Land at $15 to $30 an Acre

—land similar to that which through many years has yielded from 20 to 45 bushels of wheat to the acre—oats, barley and flax also in great abundance, while raising horses, cattle, sheep and hogs is equally profitable. Hundreds of farmers in Western Canada have raised crops in a single season worth more than the whole cost of their land. Healthful climate, good neighbors, churches, schools, rural telephone, excellent markets and shipping facilities. The climate and soil offer inducements for almost every branch of agriculture. The advantages for

Dairying, Mixed Farming and Stock Raising

make a tremendous appeal to industrious settlers wishing to improve their circumstances.

For illustrated literature, maps, description of farm opportunities in Manitoba, Saskatchewan, Alberta and British Columbia, reduced railway rates, etc., write

K. HADDELAND,
Great Falls, Mont.
Park Hotel, 104 Central Avenue.

Authorized Agent, Dept. of Immigration and Colonization, Dominion of Canada

160 ACRE FARMS IN WESTERN CANADA FREE

Eggs and Poultry Sold at Good Profits

Through a little Classified ad in our Farmers' and Stockmen's Exchange, surplus eggs and poultry can be sold at a good profit. Others are making money through our Classified Columns. So can you. We get letters almost every week telling of good sales made.

Mrs. J. F. Lamm, Ft. Morgan, Colo., writes: "Sold all I had to ad. Your ads are sure business getters."

You, too, will get profitable results if you send send in a Classified advertisement. See pages 14 and 15 for rates, etc.

WESTERN FARM LIFE,
Denver, Colorado.

A PERFECT SEED BED WILL DOUBLE YOUR PROFITS

WESTERN PULVERIZER PACKER AND MULCHER

Nothing is so important as a perfect seed bed. It means perfect stands, best seed larger crops. The WESTERN has proven this in thousands. In one operation it pulverizes and firms the soil as deep as plowed and leaves a loose granular mulch on top to protect the moisture. Get 5 to 10 bushels per acre more by breaking the crust on winter wheat in the spring. The WESTERN has no equal for this work or for covering clover or grass seed.

PRICES REDUCED BELOW NORMAL

Our low price direct will surprise you. Our free catalog shows the work, explains construction and why it produces better crops than other rollers. Contains letters from farmers using it. "Worth its weight in gold." Write today for this book and price freight paid.

WESTERN LAND ROLLER CO. Box 18 Hastings, Nebr.

Changes in Federal Loan Act.

Members of National Farm Loan associations as majority stockholders in the Federal Land Banks should have a voice in any changes made in the Federal Land Act. Congress now is giving consideration to proposed legislation affecting this act. It is your right to express your position on the proposed changes and the desire of Congress to know your wishes.

The Federal Farm Loan Board in its fifth annual report recommended the following changes in the Federal Loan Act:

1. That the executive management of the Federal Land Banks be permanently vested in the Federal Farm Loan Board.

2. That the Federal Land Banks be authorized to make loans direct to borrowers.

3. That provision be made for voluntary liquidation of national farm loan associations, their members becoming direct borrowers and direct holders of Federal Land Bank stock.

4. That the Federal Farm Loan Board be empowered to remove secretary-treasurers of national farm loan associations.

5. That a corporation, to be controlled by the presidents of the Federal Land banks and the members of the Farm Loan Board, be created to manage, for all of the banks, the business of buying and selling farm loan bonds, including the apportionment of the proceeds thereof among the several banks and associations.

The Senate Committee on Banking and Currency asks that members of national farm loan associations and others interested indicate by number which of these recommendations are approved and which disapproved, and forward to the committee at Washington.

Trees for Plains Region.

Some kind of tree can be grown anywhere in Colorado where it is possible to make a living farming, say forestry specialists at the Colorado Agricultural college. To help farmers in the plains region to get trees started the State Forester at Fort Collins is distributing at cost each April, trees best adapted to the conditions. They are of a size which makes it financially possible for everyone to plant groves and shelter belts. Full instructions as to planting and care are supplied. The purpose is service and not profit. Persons who take advantage of the offer to get trees at cost must agree to report upon request as to the success or failure of his plantings in order that future advice may be even more valuable.

Orders are being taken now for shipment in April. The price list for this year follows:

Russian Wild Olive, 18-24 in.	6c
Honey Locust, 18-24 in.	2c
Black Locust, 18-24 in.	2c
Ash, 18-24 in.	2c
White Elm, 18-24 in.	3c
Cottonwood, 18-2 4in.	2c
Basket Willow Cuttings, 10 in.	1½c
Hackberry, 4-5 ft.	35c
Jack Pine, 12 in. (3 yr. old)	2c
Western Yellow Pine, 12 in. (3 yr. old)	2c
Western Yellow Pine (4 yr. old transplants)	5c
Limber Pine (3 yr. old transplants)	2c

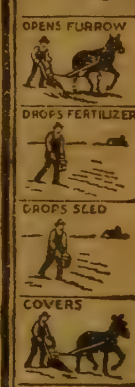
Remittance to W. J. Morrill, State Forester, should accompany order and may be by postal or express money order, currency, cashier's checks, or stamps of 2c and 4c denomination.

Shortage of Good Horses.

Men who went to the sugar company's big sale of horses and farm machinery at Longmont recently expecting to find horses on the bargain counter were disappointed. The high team brought $405 and the average for draft horses and colts was $105. The spread between big sound drafters and just ordinary horses, however, is getting wider. The excess charges on getting horses to the central markets has been a drag and has held horses back. Dealers at seven leading markets of the country report 30,000 horses and mules sold in January, and in most coses a considerable increase over sales of January, 1921. Prospects are brighter for a fair spring trade for good sized chunks and draft horses than at any time in two years, says Harry McNair of the Chicago Stock Yards. There is an increasing demand for good horses for city delivery. The man with good drafty mares can hardly go wrong in breeding them to draft stallions of proper conformation.

The scrub bull's family tree is a brush heap.

Eureka Potato Planter



For over 21 years the Eureka one-man planter has been a success with thousands of small and big growers
Does 5 operations at once, automatically and accurately.
One man and team opens furrow, drops seed any distance or depth, drops fertilizer (if desired), covers, and marks next row. Furrow opens and seed drops in plain sight—an equal distance apart. Better and quicker than hand planting and increases yield. Operates in any soil. Write today for free catalog describing the largest line of planters made. Sizes for 1 or 2 rows, with or without fertilizer attachment. Special attachments for unusual soil or field conditions. In stock near you.

EUREKA MOWER CO.
Box 675 Utica, N. Y.
Send for Catalog

Does Above Four Operations in One

NO STUMP TOO BIG FOR THE HAND POWER K Stump Puller

One man with a K can rip out any stump that can be pulled with the best inch steel cable. **No Digging—No Expense for Teams or Power**
Works by leverage—same principle as a jack.
Made of the finest steel—guaranteed against breakage Endorsed by U. S. Government experts.
Write today for free booklet on Land Clearing.
The Fitzpatrick Products Corporation
99 John St., New York
952 Mission Street, Box 95
San Francisco, Cal.

Book on

Dog Diseases

And How to Feed

MAILED FREE TO ANY ADDRESS BY THE AUTHOR

H. Clay Glover Co., Inc.
129 W. 24th Street New York

Big Money Boring Wells

Have water on your own farm. In spare time make wells for your neighbors. It means $1000 extra in ordinary years, double that in dry years. No risk—no experience needed.

Outfits for Getting Water Anywhere

Earth augers, rock drills and combined machines. Engine or horse power. *Write for easy terms and free catalog.*

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BLACK LEG

100% PROTECTION FOR LIFE from *one* vaccination with **Cutter's Liquid or Solid Blackleg Aggressin.** Absolutely safe. Cutter's Solid Aggressin Injectors work just like Blackleg Pill Injectors. If Cutter's Aggressin is unobtainable locally, write

The Cutter Laboratory
"The Laboratory that Knows How"
Berkeley (U.S. License) California

N.B.—Old Style Powder and Pill Vaccines still made for those who prefer them.

Windmill Prices Reduced

Write today for Free Catalog and reduced prices on CURRIE Windmills, Feed Grinders, etc. Big Bargains in all styles and sizes we manufacture.

CURRIE WINDMILL CO.
7th & Mellday, Topeka, Kansas.

Farmers, Trappers—Attention

LET US TAN YOUR HIDES AND FURS into useful articles, such as robes, coats, rugs, mittens, caps, fur sets or any kind of leather.

If you prefer selling, send your furs to us for full market value. WRITE TODAY for FREE fur price list, tanning price list and shipping tags.

The Bismarck Hide & Fur Co.
Bismarck, N. D.

Western Farm Life

A Western Magazine for Western Farmers and Stockmen

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Need More Brood Sows and Pigs on Our Farms

PRACTICAL HOGMEN TELL OF THEIR FEEDING AND MANAGEMENT METHODS

"MORTGAGE lifter" is the title long held by the humble hog. He has well earned the title, for many a farmer of small means has been able to get ahead by giving the hog a chance to market his grain and pasture on legs as one of our contest letter writers has so aptly said. For a long time the impression seemed to prevail that the corn farmers of the Mississippi valley had a prior claim on the hog and the western farmer could not compete with them. That theory is now exploded and Colorado and other mountain states have found the hog to be mortgage lifters under western conditions as they were back east. Colorado hogs have won at Chicago and no longer can the "corn-belt" men claim any exclusive right to the hog as a farm money maker.

Prize-winners from the Blue Ribbon Livestock Company farm.

Men who have succeeded with hogs are telling about it on this page. What they have to say out of their experiences with the identical conditions under which many of our readers operate, will be worth more than pages of theories on pork production written by editors. These men who have told of their methods have learned many things worth while and we are fortunate in being able to present the prize letters to our readers and would urge that they be carefully read. The prize letters are not the only ones of value, for a number of letters well worthy of honorable mention have been received. We regret that we cannot print all of them in this issue.

Most Profitable Stock Kept.

FIRST PRIZE LETTER.

For the last two years none of our other livestock has been able to compare with the hogs in profit-making. This has been due, of course, to the unusual difference between the price of corn and the price of hogs. This is a condition which everyone agrees cannot continue indefinitely, yet it is seldom that hogs properly handled do not show a fair profit above the cost of feed. And it is only the man who regularly raises hogs that is prepared to take advantage of the periodically high markets that really make money. But if the feeding of hogs showed no profit at all above the market price of feed, almost any farmer who raises corn would be ahead by feeding it to hogs. When corn was worth 3 cents a pound it was well enough to haul it to the elevator and let someone else take the risk of feeding it. That day is past now, and yet every day I see loads of corn going to town, most of them from a distance of fifteen to twenty miles, to be sold at a price that little more than pays wages for the hauling. Some of it is hauled by men who buy the pork they eat. Surely the hog would be a profitable investment for such farmers as these.

In the six or seven years that I have been raising hogs, I have learned some things through study, observation, and experience that need to be understood by anyone who hopes to handle them profitably.

Started With Bred Gilt.

While making preparations to start farming I attended a farm sale near Littleton, Colo. A herd of young registered Duroc Jersey pigs were being closed out, and although I had no idea of buying any hogs at the time, these pigs seemed to be too cheap to pass by and I bought a gilt. I had no place for her and so I hired a neighbor to keep her for me by the month. This man kept a rather large number of hogs of no particular breeding. He kept the gilt till the next spring and she was bred and farrowed a litter of pigs at his farm. It happened that three of his own sows had pigs about the same time as mine and each one of them had four pigs. My sow farrowed eight pigs and raised them all. Needless to say, this comparison was very gratifying to me, and I began to think that possibly there might be some tangible advantage in raising hogs of good breeding, a thought that I had never taken seriously before.

I took the sow and pigs to our own farm here soon afterwards, where they did well. The sow afterwards raised litters of ten and eleven and all the hogs we have now are descended from her.

I find that the ability to raise large litters is a very real consideration in selecting a type or strain of hogs for it influences materially the initial cost of the feeding hog. You often hear it said that eight or ten pigs is too large a number for a sow to feed and that she would have raised better pigs if there had not been so many. This is always the argument of the man with scrub sows and small litters. It has always seemed to me that the sow bred to farrow large litters is also bred to suckle them, and I am sure that I have had more and worse runts in litters of four or five than in litters of ten. The small litters and poor quality are probably due to the same cause.

Get Pigs Started Right.

After a pig reaches weaning age the rest is mainly a matter of giving him plenty to eat. Most of the caretaker's opportunities making for success or failure come between the time the sow is bred and the time the pigs are a few weeks old. The care of the sow at all times is important, but especially after she has been bred. I take pains to see that the feed is somewhere near a balanced ration and try to supply plenty of mineral matter by giving her wood ashes, coal and egg shells. This is in addition to a small amount of skim milk, a feed rich in minerals. Our sows always have been of an active disposition and on a limited ration, have seemed to take sufficient exercise. We always keep our pens as large as we can afford to fence, and the dirty, muddy, little pen barely big enough for a hog to turn around in is something I have never thought it worth while to try. I had always read that brood sows should not be kept too fat and know it to be so now as the result of a little practical lesson. One winter we had two brood sows, an old one and a gilt which it was rather inconvenient to shut up, so let them run out. They were able to get all the corn they wanted and also fresh horse meat. Our sows always had done all right, and, as they took lots of exercise, we thought or at least hoped, they would this time. The old sow had invariably farrowed eleven pigs before. This time she had six and saved two. The gilt apparently aborted. The old sow afterwards farrowed her litters of eleven again under better management. The gilt went to market.

It is usually the custom to have pigs come in spring and fall. Where they are to be grown on alfalfa pasture this is no doubt the best plan, for they utilize the pasture best. We depend principally upon grain without pasture and for the last two years have followed a different plan. We have the pigs come in mid-winter and mid-summer. We grow them rapidly on practically a full feed and have the winter pigs ready for market by September and the summer pigs by January or February. In this way it is possible to avoid the rush and strike a better market, especially in the fall. It takes a little longer to turn the corn into money in this way, as the pigs sold in September are fattened on last year's corn, but often they bring a great deal more than if sold in November.

Of course, it is necessary to have a warm place for farrowing winter pigs. We use a box stall in the horse barn, which is unusually warm. I keep them there till they are about two weeks old and put them in individual portable hog houses, banked with manure. For some reason the pigs born in midwinter always have been unusually strong and active.

Care at Farrowing Time.

When a sow is to farrow, I see that the wall of the house or pen is lined on all sides with a two by four, having the bottom about six inches high and so fastened as to project about six inches from the wall. If the space under this is kept clear the sow cannot mash the pigs against the wall in lying down. I keep the pen clean, but without enough litter to en- (Turn to Page 11

Do You Grow and Cure Your Own Pork?

ENOUGH hogs to provide the home meat supply without regard to market conditions is a good slogan for every farmer to adopt. There should be hogs enough to consume the skimmed milk, the slop, and clean up the waste grain about the place.

Buying bred sows usually is the best and most satisfactory way of getting a start in hogs. It is better to buy a bred sow that has farrowed and raised a litter than a bred gilt. Sows as a rule raise more and stronger pigs and take better care of them than the young and inexperienced mother.

Many farmers prefer to buy weanling pigs because the initial cost is low. Young pigs make good use of skimmed milk and other unmarketable feed, and when ready for breeding purposes represent but little actual money outlay. This method presupposes knowledge of how to care for pigs so they will make steady, rapid growth and develop into strong vigorous breeding animals.

If one is inexperienced in handling hogs and desires to go into hog raising with a limited investment, it is safer to pick up some good grade sows or pigs and learn the details of management at a minimum of expense.

We do not agree with Mr. Smith's statement that a runt is always a runt. The writer has taken the runtiest and most badly stunted pigs in a herd and by careful feeding and nursing, brought them out so that at market time they made a good showing along with others of the same litter. We will admit, however, that for the average busy farmer it will not pay to take the time and trouble required. He had better give the runts to the children and help them learn how to care for them and bring them out. The children will not only make money for themselves out of the pigs, but they will become more interested with the rest of the herd. We have known farmers who have got a good start in hogs without capital by securing a few runts from neighbor hog raisers. This can be done with plenty of milk and patience.

The experienced hog raiser who is now growing grades will find it to his advantage and profit to use good registered boars. He then can easily get a start in purebreds by purchasing a purebred sow, a gilt or weanling pigs. The investment will be small compared with the results. In an astonishingly short time the entire herd can be transformed from grades to purebreds with a good market for surplus breeding stock and a better and more profitable hog for the packer market.

Publisher.

Pork and Peas on an Idaho Dry-Land Farm

GROWING LEGUME CROP ON FALLOW GROUND AND HOGGING IT DOWN

George F. Stratton.

MAKING 86,250 pounds of pork on 400 acres of land which would otherwise have produced absolutely nothing, and selling that pork for more than $12,000, was the method adopted by an Idaho dry farmer last prices and forced liquidation.
year to sidestep the disaster of smashed

Men from the east of the Missouri river, riding across the great dry farm sections of Northern Idaho in June, gazed with wonder upon the peculiar appearance of the farms. Great squares or oblongs of land will be vivid green, while alongside are large tracts of raw soil, often finely tilled and without a weed. In July the green fields will be golden, but the raw land will be chocolate brown or red loam, according to the country you are in. The latter is still smooth and finely broken, but without one vestige of green—either weed or crop.

"What's the matter!" exclaimed a farmer from Wisconsin as we gazed out over thousands of acres of such checker-board land. "Why haven't they planted all that acreage!"

"It's summer fallow," I answered. "Good dry farmers let the land lie idle every other year or every second year, and raise more grain than by continuous cropping. They harrow it as fine as that to keep down the weeds and save the moisture for the crop."

But if E. J. Armbruster of Moscow, Idaho, had been asked that question, he probably would have answered with a smile: "It's because they don't know what elese to do with it. They must have a rotation of some kind in dry farming, and summer fallowing is almost the only rotation they practice."

Grows Peas on Fallow Land.

But Mr. Armbruster practices something else, as intimated in my opening paragraph. The Palouse district in Idaho at the northern extremity of which Moscow is situated, is well settled and fine improved, although almost entirely without irrigation. No finer crops of wheat are grown in any dry country, chiefly because of fallowing the land every second or third year.

Very little stock is kept—only the horses and a few cows for home use. Usually a quarter-section farm has one hundred acres in wheat, or fifty in wheat and fifty in oats or barley, fifty acres in fallow, and the remaining ten acres in alfalfa and garden.

Some pears ago E. J. Armbruster, a large farmer, tried peas on a small patch of his fallow land and succeeded well. Now, let him tell the rest as he told it to me when I visited his ranch:

"You see," he said, "I've got 1,200 acres and always put 400 in clean fallow every year. It used to break my heart to look at that fine clean seedbed doing nothing. It was plowed and harrowed down in the spring and harrowed twice, at least, after that. Sometimes we harrowed three or four times. Then we planted wheat in the fall.

"That was putting on as much work as to produce a cultivated crop and it sure cuts in.

"So I thought I'd try peas. I put in a forty-acre field and did well. There was a good demand for seed peas and the prices were fair, but after threshing I had a big lot of pea straw and nothing to feed it to. One year I bought a bunch of feeder steers and fed them the straw and some roughage and that opened my eyes.

Hogs Harvest Pea Crop.

"Now, although I knew that peas, like any leguminous crop, was a good rotation for wheat, I also knew that fertilizer was just as valuable and as necessary to keep the land up to its best. When I planted wheat right after peas I beat the fallowed land by eight to ten bushels an acre, and when I pastured a bunch of cattle on one patch of peas they not only did the harvesting, but I got a still better crop of wheat the next year.

"So I went at it. I bought, one year, 400 feeder hogs and didn't thresh any peas—just hogged 'em off and it paid me well."

"Suppose, Mr. Armbruster," I suggested, "you give me the details of one year's operation with them; just when you brought them in and how you fed them."

"I'll give you last year's work," he said, "although it was the poorest paying year I've had. I had 400 acres in peas, part Blue Prussian and part Blue Bell. They're both good for seed or feeding. In September and October I bought 750 stocker hogs, picking them up here and there. They were of all breeds, but good, stocky feeders, and averaged 85 pounds apiece when I got them.

"I turned them loose on my wheat stubble and the pea land. My fields are all fenced, hog tight, and they fed that way until November 1, when I cut out two hundred head of the heaviest, averaging 216 pounds, and shipped them to market, right from the fields.

Good Gains on Peas Alone.

"When I cut them out, I also cut out 200 of the next best, lighter weights, and put them in a feed lot and fed straight peas for two weeks. You see, I only hogged half of my peas. Part of the other half I cut and hauled for winter use, and part I threshed. But I sold no seed last year. The price dropped to 1½ cents a pound, so I fed everything.

"Well, that second lot averaged 210 pounds when I shipped them out. The third lot, 200 head, were shipped the first week in December and weighed 185 pounds. They were taken off stubble November 1 and fed in the feed lot for five weeks on unthreshed peas.

"The last lot, 150 head, went out the first week in January after two months' feeding on straight peas. They weighed 185 pounds. They were, of course, the poorest stockers when bought, but they made up the average. The total gain on the 750 head was 86,250 pounds and I sold them on an average at 16 cents a pound."

"What did you pay for them?"

A very wry grin came over his face. "Nineteen cents! Feeders' luck! I thought I was safe in buying at 19 cents, but I lost out, you see."

That looks serious at the first glance, but it brightens up when the weight is considered. His hogs gained 86,250 pounds and brought him $11,887 more than he paid for the stockers—a gross return per acre of about $30. In addition, he finished 73 feeder steers which cleared him $1,500 more. And the manure was a valuable asset.

Crop Cost Nothing But Seed.

"But," he continued, "that crop cost nothing to make but the seed and what little threshing was done. I have to keep help here, anyway, and the drilling-in the seed was no more work than harrowing the fallow land would have been. I reckon that $12,000 was nearly all clear.

"Of course, if the market hadn't slumped against me, if I'd got the same price for the market hogs as I paid for the stockers, 19 cents, I'd have made $4,500 more. I ought to raise my own pigs and get out of the feeder game. The men I bought from made more than I did and took no risk. The fellows around here call me a speculator and I reckon they're right. Feeding is always a speculation—playing against the market.

"All the same, I'll tell you something else, and you can judge for yourself if it's all speculation. When I used to sell all of my pea crop for seed—and there's lots of them do that now—I was (Turn to Page 15)

Pigs out in the fields helping themselves.

Market Outlook for Farm and Ranch Products

REVIVAL OF INDUSTRIES INDICATES PROSPERITY FOR AGRICULTURE

Edited by Glenn G. Hayes.

THE remarkable advance in prices of farm products in the last few weeks is capable of but one interpretation: The return of prosperity for agriculture. In some instances prospective scarcity has provided a foundation for the advance in commodity prices, but most of the upturns have been much more rapid and profound than the shortages, actual or impending, would indicate. The swinging of the economic pendulum toward revival of industry, business expansion and prosperity, has been the most powerful factor.

It is only natural that agriculture should be first to feel the effect of what some folks like to call the "secondary inflation" as farm products were overdeflated, but other lines are beginning to prosper also. Freight loadings are on the increase, thus adding to railroad income; a building boom is in the incubation stages, and the number of men employed in automobile factories, cotton manufacturing, cotton finishing, hosiery and underwear, woolen and silk mills and leather, boot and shoe factories, during January was considerably larger than in January, 1921. These things point to more ready outlets for the products of the farm.

Foreign problems affecting the American farmer are troublesome, but the best barometer of financial progress in Europe is found in the exchange rate. Sterling has risen above $4.40, compared with a par of $4.86, and a low figure of $3.16 in 1920. Central European exchanges have not done so well as their budgets are too far out of balance and paper money inflation has been many times more severe. But Europe seems to find funds for food and raw materials and she has been a willing buyer in this country.

Labor troubles are on the horizon in this country with a soft-coal miner's strike scheduled for April 1, but if prosperous conditions return, a conflict over wages may be deferred. On the other hand, labor leaders should be too wise to press immoderate demands if industrial revival has not appeared.

Cattle Market Creeping Upward.

Although the beginning of Lent caused momentary hesitation in the cattle market, dressed beef prices have been maintained or advanced and values on the hoof have followed suit. Net changes have been small in all classes, although prices average nearly $1.50 higher than at the low period in late December.

Price trends in the cattle market during the spring usually have a distinct seasonal behavior. Steer prices customarily advance as the number in feed lots dwindles. This advance in average values is entirely separate and apart from the advance due to the fact that the cattle held until spring have had longer acquaintance with corn as a rule and are superior in finish to those marketed during midwinter.

Plain light steers sell well during the spring because they are scarce at that season and there also is a scarcity of cow beef with which they compete. Feed lots were filled with light steers last fall, however, so that light beef should be abundant this spring. There will be less Texas beef than usual, as a partial offset.

Cow and heifer prices, including cutters and canners, advance in prices during the spring months, usually reaching high point in May. Most of the cows and heifers to be disposed of are sold before this date, and the demand for stock cattle helps the market.

Veal calf receipts begin to increase by the first or second week in March, reach the high point of the season late in the month or during April, then taper off gradually but remain above the average until the end of May and sometimes throughout the month of June. The price indicator goes down when receipts increase. The sharp decline during March has already started, as prices broke around $1 last week, abetted more or less by the slump in the lamb market.

Stockers and feeders almost invariably advance in value during the spring months when pasture men everywhere are in the market. Scarcity of light steers at this season also brings competition from slaughterers. Increased purchases on the part of country buyers are already in evidence and values have advanced since January fully as much as the fat cattle market. Although the margin between thin and fat cattle is not a large one, there promises to be a buyer for every steer suitable for the country outlet. Graziers from the Mineral Point, Wis., district, are beginning to buy and will take about the usual number. Their activity is an important factor in determining values upon fleshy feeders with quality throughout the spring months, both at Chicago and Omaha. In the southwest, high prices for cattle and for grass have retarded the Kansas and Oklahoma pasture deal, but from all points of the compass evidence is appearing that stock cattle values will not sag much during the next sixty or ninety days.

Provision Stocks Unusually Low.

Stocks of lard at the leading packing points increased only to a negligible degree during February, and the total on March 1 was only about half as large as on the same date in 1921. The increase in dry salt meats also was inconsiderable and the increase in pickled meats much less than usually occurs during February. Total stocks of meats at the end of February were only 190,641,000 pounds, compared with 314,337,000 pounds on the same date in 1921. Both lard and dry salt meats have been selling at prices entirely too low to furnish a profit to the packer, which is one reason for the absence of an accumulation. Land and cured hog meat prices have been advancing recently, however, so that the light stocks in packers' hands mean that the hog market will run into (Turn to Page 13)

Dairymen Must First Learn to Feed for Milk

ELIMINATE THE BOARDERS AND GET MORE PRODUCTION FROM REST OF HERD

George C. Wheeler.

REDUCE the number of cows you are milking and get more milk from fewer cows by better feeding was the central theme of the talks made by Professor Geo. E. Morton at the Dairy Day meetings held by the Colorado & Southern railroad, in co-operation with the Colorado Agricultural college and the Colorado Dairy council. Better feeding is one of the first things a beginner in dairying must learn. A cow is a machine for converting raw material into milk and without sufficient amount of the right kind of feed she cannot make milk. Wherever better feeding has been tried out cows of more than average productive capacity have been found. They simply never had been given a chance.

Farmers generally depend on rough feed too much, pointed out Professor Morton. Of course, the reason is that rough feed is grown on the farm and no one wants to put money in feed if he can get profitable returns from that produced on the farm. Roughage is the foundation of the profitable dairy ration and where legume roughage as alfalfa is available it is not difficult to balance a ration properly.

Grain Brings Cash Return.

Professor Morton reminded his hearers that the dairyman is not in the same position as the feeders of cattle or sheep, for they never know until the animals are ready for market whether they will get a return for their feed or not. The dairyman sells his product every week and while he may be putting money into grain he gets a cash return for it when he sells his product, and if the grain is not costing too much may expect a profit from feeding it. At any rate, it is easy enough to find out whether it is paying, for he can check on results every week. The way to do is to add a good grain mixture to the ration and then weigh the milk to see whether the cow is responding to the ration. If she increases in production sufficient to pay for the extra feed, give a little more. When a cow ceases to respond at the pail it is time to stop. Some cows will not respond to the increased grain, or not as the milker wants a cow to respond. When the grain goes on the back it is not bringing any return to the dairyman unless the cow is almost at the end of her lactation period and has previously proved her capacity as a milk cow. A good milker can be allowed to lay on some fat while dry, for it will be returned when she freshens.

Alfalfa and silage is the best possible combination to build on in feeding dairy cows. With all they will eat of these two roughages, a grain mixture made up of two parts corn chop, two parts ground oats, ½ part dried beet pulp, and ½ part cottonseed meal was given as a good one for profitable milk production. It is essential that the milk cow ration have sufficient protein for nothing else can take its place. If it is deficient the cow simply cannot produce milk, no matter how much she may have of carbonaceous nutrients and fat in her feed. It is like trying to put together a house with plenty of boards but with a limited supply of nails.

Feed for Production.

Other grain rations suggested as suitable for use with alfalfa and silage were one part ground barley, one part corn chop, one part ground oats, and ½ part cottonseed meal, and another, ground oats and barley equal parts.

Another point which many do not appreciate sufficiently is that it takes about half of all a cow can eat and digest just to keep her going, in other words, provide for her body requirements. There is no profit in running an empty machine and that is what a cow is when fed a bare maintenance ration. When there are not proper feeds on the farm the economical dairyman is tempted to feed sparingly, enough, Professor Morton pointed out by way of illustration, to produce perhaps fifteen pounds of milk daily, for of course the cow takes the maintenance requirements first. To produce another fifteen pounds of milk with this method of feeding another cow must be fed all this amount required for maintenance and the little over required for the fifteen pounds of milk. If the first cow has milk producing capacity feeding her the small amount extra required for the fifteen pounds of milk will permit her to produce thirty, and the maintenance requirements of the extra cow will not be needed. That is what was meant by feeding fewer cows, but getting more milk. Cows must be fed as individuals and in any herd of any size following out the procedure outlined in the foregoing will cull out unprofitable animals and find others that are not being fed up to their capacity for production. After this lesson has been learned the dairyman is ready for better cows and can replace the ones found to be unprofitable by putting in better ones.

Dairymen Need More Pasture.

Pasture for dairy cows was another point given considerable attention in connection with feeding milk cows. Running milk cows over eight to fifteen acres to the animal to get enough grass to supply the materials for profitable production does not work. Dairymen must have better pasture.

Dairy Day meetings were held at Parker, Elizabeth, Kiowa, Elbert and Eastonville, all points in the Divide section. In the creek valleys and even on the second bottoms and upland in the Divide regions of Elbert and El Paso counties some progress has been made in establishing pastures. On the Forest Glen farm, last spring, Mr. Cornforth seeded on an old cultivated field meadow fescue with a drill without giving the land any preparation and pastured it quite heavily the same season. He also seeded some bromus inermis or awnless brome grass which has made quite a catch and already has shown its habit of sending out underground rootstalks and starting new plants. On another 200-acre pasture seeded three years ago with a mixture of meadow fescue, bromus inermis, sweet clover, alsike clover and rye grass, forty-five to fifty cattle were run last summer. Mr. Cornforth said that he had increased the carrying capacity of his ranch 50 per cent by getting these tame pastures started. Another man told of cutting one and a half tons of bromus inermis hay to the acre on dry land. The Cornforth ranch is a purebred establishment, but ten grade cows are milked and the sale of cream for 1920 was $1,208 in addition to all the milk and cream used by two families. In 1921 from nine cows the records showed cream sold to the amount of $746, and three families supplied with all they needed. This illustrates the possibilities in dairying as a feature of general farming. One station in Elbert handled $150,00 worth of cream last year.

Good pasture for the dairy herd means cheap milk.

How to Start Pasture.

Economy of production was in the minds of many who attended the Dairy Day meetings. Discussion of the pasture question aroused keen interest. Men who milk cows need not be told of the advantage of having good pasture. They know the value of pasture in economical production. They have seen it demonstrated year after year as they have watched the cows respond to the grass late in the spring or in the summer. On grass, cows produce their maximum amount of milk and at the least cost, providing the pasture is good enough to supply all they need without their having to range over too much area. Professor Morton has realized this and started to work twelve years ago to see what could be done to develop better pasture conditions. His aim was to find the best (Turn to Page 22)

No Mortgages on Farms of Johnstown Community

ELEVENTH DAIRY DAY SHOW BRINGS OUT QUALITY EXHIBITS OF CATTLE

DREAMS do come true, thought the men who eleven years ago aroused enough interest in a dairy cattle show to get out five grade cattle to the first Johnstown dairy show, as they saw the purebred Holsteins and Guernseys shown at the eleventh annual Dairy Day show, held March 3. All through the showing the judge, A. C. Osterhous, fieldman for the Carnation Milk company, commented on the high quality of the animals shown. "Not even in the famous dairy centers of Wisconsin can better Holsteins and Guernseys be found," he said.

Dairying Transforms Community.

This community hsa been transformed by the development of the dairy interests alongside the production of sugar beets. On every side are seen evidences that dairying has brought prosperity. There are good houses and barns, well kept fences and other indications showing that dairying has put money in the pockets of the farmers of this community. "Dairying has made Johnstown farmers so prosperous," said Mr. Letford of the First National Bank of Johnstown at the meeting held in the evening, "that for four years no mortgages have been placed on any of the farms in this community. You can go down that road ten miles," he said, "and find every farm on both sides a dairy farm and every farmer carries a good bank account." Mr. Letford is a dairyman himself, being a member of the firm of Crowley & Letford, showing Holsteins at the show. Another outstanding herd was that of Whowell & Polley, known as the Virginia Lynn herd. Another was the Van Meter & Krebill herd from near Loveland. There were also newer members of the purebred circle showing perhaps only one or two animals. Robert Sneeden, who began with "just cows," had two animals in the competition to try to compete with the old-timers in the business, and was not discouraged because he did not carry off any blue ribbons. He is farming his father-in-law's farm and finds with the help of a milking machine milking cows does not interfere with beet farming. S. A. Gray had two Holsteins; Leroy Wailes, three; Chas. Dye, one, and the Colorado Agricultural college had thirteen head of Holsteins and Guernseys, including their grand champion at the Denver show.

There were not so many Guernseys as Holsteins, but it is evident that some one brought some real Guernseys into this section when they first began breeding dairy cattle, and they have been in the hands of real breeders since. The Guernsey exhibitors included J. W. Purvis of Johnstown; Howard Brothers, Bender & Son, Berthoud, and D. E. Webb.

All Roads Led to Johnstown.

All roads seemed to lead to Johnstown and the superintendent had trouble keeping a ring open so the judge could see the cattle. It is hard to realize how a community can so completely change in its interests. The show has not developed into a showing of what are sometimes spoken of as show ring type of cattle. The Johnstown cow testing association is one of the most active in the state. A production contest is an important feature of this show. In this contest more than four hundred cows were entered, the contest year being from March 1, 1921, to March 1, 1922. Walter Gurkink, the cow tester for the cow testing association, announced the results as the three winning cows were led into the ring. The first place cow was a Holstein entered by Whowell & Polley, with a record of 13,777 pounds of milk and 612.5 pounds of butterfat; second, a Holstein owned by Crowley & Letford, with a record of 17,129 pounds of milk and 598.4 pounds of butterfat, and the third, another Holstein from the Crowley & Letford herd, with a record of 17,425 pounds of milk and 583.6 pounds of butterfat.

Judge Explains Placings.

In making the awards, A. C. Osterhous explained the points upon which he based his decisions. This added greatly to the educational value of the show. Mr. Osterhous is a recognized national authority on dairy cattle. He highly commended the cattle coming up for his decision and stated that he had never seen more quality in a local show. He emphasized dairy type and conformation in his placings. A winning cow had to be straight of back, long and straight in rump, deep of body and good in heart girth, and finally carry a uniformly developed udder attached high behind and well forward with squarely placed teats of good size. He turned down the Colorado Agricultural college cow to third place largely because of her poorly supported udder and also because she showed slightly lame. Although a Holstein specialist, he recognized dairy type wherever found and remarked when he had the aged Guernsey cows in the ring that he seldom saw a better ring of dairy cows. The Purvis cow heading this class was later made the sweepstakes cow of the show, defeating the Whowell & Polley Holstein which stood at the head of the aged cow class in that breed. Crowley & Letford won the bull sweepstakes prize with their aged bull, winning first in his class, and reserve champion cow. The Chas. Ewing Guernsey aged bull winning first in his class was made the reserve champion bull. One of the coveted honors of the show was that on get of sire. This is proof of the prepotency of the herd sires in use. In Holsteins, Whowell & Polley won first, Crowley & Letford second, and the Agricultural college third. First in Guernsey get of sire went to Purvis, second to Bender & Son, and third to Ewing. Whowell & Polley won first on produce of dam in the Holstein class, and Colorado Agricultural (Turn to Page 13)

What Crops Will Win Under Dry-Land Conditions

GROW PLANTS WITH LOW WATER REQUIREMENT AND GOOD ROOT GROWTH

E. R. Parsons.

WHAT crops have the best chance of winning and making a profit under dry land conditions is the first question asked by the man locating in a section of scant rainfall. To assist in answering this natural question our professional friends have made exhaustive studies as to the amount of water required by the different plants in making a pound of dry vegetable matter. The product may be grain, leaves or stalk, for their water requirements pound for pound are the same.

Some of the latest of these experiments were made at Akron, Colo., by Doctors Shantz and Briggs of the U. S. Bureau of Plant Industry. Their figures show the difference in water requirements of all the ordinary farm crops and presumably the plants which were the subjects of these tests were raised in the ordinary Akron soil. We note this point because the findings of other experimenters may differ from these to some slight extent on account of the soil being richer or poorer, for, as we have lately shown, the better the soil the less water is required to carry the necessary plant food, because the solution is richer.

Wheat Economical of Water.

From these figures we find that Turkey Red winter wheat can make a pound of dry matter out of 473 pounds of water, Kubanka spring wheat from 492 pounds, Kharkov 475, but when it comes to the old-style varieties such as Bluestem, Alliance and the others, the figures are much higher, running up to 559 or 560 pounds to the pound of dry matter.

Many dry farmers plant oats rather than wheat in the belief that this crop requires less water than wheat. The figures show, however, that the average required by all the different varieties of oats is over 600 pounds of water to the pound of dry matter. Therefore, unless oats are required for some specific purpose, it is often safer to plant wheat, which also will make fine hay when cut in the dough.

Rye Requires Much Water.

Spring rye is often planted by farmers with the idea that since fall rye is nearly always a success its spring type should also be a good drouth resister, but the fact is that this plant needs 685 pounds of water to the pound of dry matter, more water than any other small grain. Fall rye needs nearly as much, but being planted earlier it matures a very efficient root structure and is thus better equipped to obtain it. For hay or grain it is much better to plant wheat or barley. Barley uses more water—about 500 pounds—to the pound of dry matter than some other grains, but it has a strong, vigorous sprout and a very quick root development, maturing about two weeks before wheat. Barley makes excellent hay and the grain is good for all feeding purposes. It can also be raised on land which is not rich enough to grow wheat.

Sorghum Drouth Resistant.

The sorghums are the best drouth resisters of all known crops. The Dwarf Blackhull Kafir takes the lead, with only 285 pounds of water to the pound of dry matter. Brown Koaliany requires 296, amber cane 301, milo 317 and Feterita the same. These are all splendid cow feeds, either as fodder or silage. Kafir and milo are the best to plant where it gets very hot. Their feeding value is high, for, although termed nonsaccharine sorghums to distinguish them from the sweet sorghums or cane they all carry sugar as well as starch in their saps and this adds to their palatability. Another valuable characteristic of the sorghums is that a protracted dry spell may delay their maturity, but does not stunt them as much as it does corn. They may stop growing for a while, but will start out with renewed vigor as soon as the rain comes.

The millets which are kin to the sorghums are also good drouth resistants, the Karsk requiring less water than the German. Millet will often make good hay when planted as late as July 5 and is sometimes used as a catch crop to [illegible] one destroyed by hail. It is a [illegible]ch feed after the seed has ma[illegible] and must be fed with caution. Chickens are very fond of the grain.

Corn is one of the best crops for the dry farmer, although according to the tests it requires more water than the sorghums, but a crop can nearly always be matured in the dry farming country by deep plowing, thin planting and thorough cultivation. The flint varieties need less water than the dent varieties, some of them using only 315 to 340 pounds of water to a pound of dry matter. The Northwestern dent takes 377 pounds. Minnesota 13, which was not included in the tests, matures very much like the Northwestern Dent under like weather conditions and probably is in the same class as regards water requirements. Iowa Silvermine, however, needs more than any of the above, or 407 pounds.

Water Needs of Beans and Potatoes.

Under careful tests it was found that the Mexican beans used up 773 pounds of water for each pound of dry matter produced, while the navy bean used only 682. We have always found that in dry weather the navy bean would outyield the Mexicans in good soil and there is no profit in planting them in poor soil. Both these varieties of beans need more water than many farmers would think, and to this may be attributed the small crops matured, seldom running over 600 pounds to the acre. In order to obtain the necessary moisture they should be planted on land which has been deeply plowed and fallowed the year before. Since they have no tap root to go down deep into the subsoil for water, the crop must be made almost entirely from the seed bed and if this is not deep and full of moisture there is no chance of a profitable crop.

The amount of water required to produce a pound of dry matter in potatoes is estimated at 554 pounds, considerably less than that required for a pound in beans. In practice it is found that potatoes are easier to grow than beans, provided the farmer has the right soil. Thus we speak of potato belts, for there are streaks of land where this crop can not be successfully raised and no one should plant a large acreage before trying them out.

Alfalfa Goes Deep for Water.

Alfalfa needs more water than any other dry farm crop. Somewhere about 800 pounds are used in making one pound of alfalfa hay and yet alfalfa is raised with profit on many a dry farm. The reason is that although this wonderful plant needs a liberal allowance of water it is about the best equipped to get it. It is the long tap root which penetrates deep into the subsoil, reaching a permanently moist stratum which the shorter roots of ordinary crops are unable to reach. Another point in its favor is that its roots are perennial, thus growing longer and longer and going deeper and deeper every year.

As regards water, sweet clover is in the same class with alfalfa. Its soil requirements are not so exacting and it can often be raised in ground too light and sandy for alfalfa. It also has a tap root which goes down a remarkable distance the first year, and having secured a good hold on the soil makes its main crop, which is usually an abundant one, the second year.

Deep Root Systems Valuable.

When taking into consideration such crops as alfalfa and sweet clover it is evident that no table of the water requirements of plants can be final in determining what to plant and what not to plant on the dry farm. We must also be guided by the modifying characteristic of the plant itself, which in the case of these two crops and also some others quite offsets the drawback of their heavy demands for water.

Long tap roots and also perennial roots are of the greatest advantage to plants on the dry farm, not only on account of the depth they go and their exploiting a large mass of soil for moisture, but also because when a plant starts out in the spring from a root already formed, established, and full of sap, all it has to do is to make a top.

Grow Rhubarb and Asparagus.

Among garden perennials which do remarkably well on the dry land farm are rhubarb and asparagus. After they have made their growth in the spring the tops may dry when the drouth comes, but once established they always sprout again from the root. Among trees we notice that the black locust does the same thing. This tree may die down or be cut down, but it always sprouts again from the root once it has lived through more than one season, and for this reason is good to plant for windbreaks or any other purpose.

On dry farming it is possible to give any crop or tree more water by more liberal spacing. We usually plant about 30 pounds of small grain to the acre because the individual plants are more widely spaced and get twice as much water as when planted at the rate of 60 pounds. For the same reason corn for grain is planted one kernel in the hill instead of two or three.

Ask Parsons—

He Knows Dry-Farming Methods—A Nationally Recognized Expert at Your Service

YOU are neglecting your opportunities if you are not putting up your problems in dry-farming practice to our dry farming authority, E. R. Parsons, who contributes regularly to Western Farm Life. No dry farming expert in the country is more widely known for his knowledge of dry farming practices than Mr. Parsons. To some the term "expert" carries the idea of a book farmer long on theories but short on practical experience. Mr. Parsons is an expert in the real sense of the term. He knows what can be done with a limited rainfall in the way of raising crops, fruit, trees and gardens, for he has done it himself. To one who knows the plains regions only as they were in the old days it seems almost a dream to see what has been accomplishel by the hardy pioneers who came to the plains and learned how to make the most of the scant rainfall, building around themselves real farms and establishing permanent homes.

Mr. Parsons had his first dry farming experience in the Transvaal, South Africa. He came to Colorado in 1886 and located on a farm in Douglas county, twenty-three miles southeast of Denver, where he at once demonstrated that success in farming regions of light rainfall depends absolutely on the man. In 1895 he set out a commercial orchard on land where it was 300 feet to water and the overage precipitation from thirteen to fifteen inches. For years his cherries and apples were money makers. He has grown alfalfa, corn and wheat, and has fattened steers, a hundred head at a time, on corn produced on this dry farm without a drop of water other than the natural precipitation.

In 1907 Mr. Parsons produced forty bushels of corn to the acre on sod land which he had plowed nine inches deep. In his twenty years' experience under dry-land conditions he has always found that deep plowing intelligently practiced brought the best of results. In fact, he attributes all his successes to the thoroughness with which he cultivated his soil. He has asserted many times and can prove it by his own experience that there is no sane reason why a farmer cannot succeed on the plains of Colorado if he will farm intelligently.

Western Farm Life readers have this man at their service. If you have puzzling problems in farm practices under dry-farming conditions, send them to Parsons. He knows the principles underlying farming in the plains regions as perhaps no other man knows them. He has retired from farming extensively, but still cultivates his little dry-land farm in California, where he is now located, and devotes his leisure time writing for Western Farm Life, making it easier for the newcomer and inexperienced man to get over the difficult points in farming under the conditions which he knows so well.

Send in your letters about crops, soil treatment, varieties and any other question which you find puzzling, and Mr. Parsons will answer from his rich experience in this particular line of farming. Address E. R. Parsons, Western Farm Life, Denver, Colo.

Treat Seed Grain for Smut.

More than a million bushels of grain were lost in Colorado from plant diseases in 1919, say the experiment station specialists. Fully 50 per cent of the cereal grain losses are due to smuts.

The stinking smut of wheat, the covered smut of barley, the oat smuts, the millet smuts, the kernel smuts of sorghum, stem smut of rye and covered smut of emmer, can all be prevented by proper treatment.

Since the disease depends upon the presence of spores on the seed at the time of germination, the proper method of control is to treat the seed grain before planting.

A. K. Peitersen, plant disease specialist of the Colorado experiment station, recommends formaldehyde as the universal disinfectant for the purpose. He points out that copper sulphate or bluestone was one of the earliest disinfectants used and is still used to some extent. However, several years of experimentation have shown that formaldehyde has many advantages over copper sulphate. Formaldehyde seldom injures the seed, and can be used equally well for all the cereaels. It is applied more easily and there are no crystals to dissolve. Copper sulphate is often injurious to the grain, and for this reason the grain is first dipped in lime water. Grain treated with formaldehyde can be safely fed to stock after drying. It is somewhat cheaper to treat grain with formaldehyde than copper sulphate. The use of formaldehyde is recommended, but if one has become accustomed to the use of copper sulphate, and is satisfied with the results obtained, a change of method is unnecessary. Details about seed treatment for smut prevention are given in Extension Bulletin No. 185, "Seed Treatment for Prevention of Cereal Smuts," by Mr. Peitersen. Write to Extension Department, Colorado Agricultural college, for free copy of this bulletin.

More than eleven million bushels of corn were produced in Colorado last year, according to the report of the Colorado State Board of Immigration co-operating with the Federal bureau of markets and crop estimates. In 1920 the production was more than eighteen million bushels.

Like Begets Like.

Criticism is sometimes directed toward the breeders of registered cattle to the effect that they are exhibiting a type of cattle not desired by the producer of market beef. Possibly this may be true in a very few instances, but the demand for any particular breed of cattle would rapidly wane if it did not satisfy the requirements of the average farmer or stockman, the packer and the consumer.

To breed cattle which will produce the greatest amount of high quality beef, in the shortest possible time at the least cost, is the ideal the constructive beef cattle breeder has in mind. The ability of the Hereford to "carry on" and the fact that the Hereford breeders of today have not deviated from the ideals of the founders of the breed whose work began nearly two centuries ago, has never been more forcibly illustrated than at the recent National Western Livestock show at Denver.

The grand champion steer of the show was a purebred Hereford calf bred and exhibited by W. N. W. Blayney of Denver. This calf just a few days over a year old, weighed 930 pounds and when butchered dressed out 66.66 per cent marketable beef, confirming the judges' opinion of the steer as shown on the hoof.

John Clay, the veteran cattleman, after viewing the carcass, wrote for his publication, "Live Stock Markets," as follows: "Great interest was taken in how the Blayney champion would kill out. He verified his standing as a grand bullock—one of the best ever, by being awarded the first ribbon on the hooks. Hanging up he showed a smooth, excellent carcass. No waste and considering his age handled well."

When later on in the show the sire of this calf was adjudged first prize aged Hereford bull, and then grand champion Hereford bull, we see that through his heritage the calf came by his honors quite naturally.

The bull must be an excellent animal as an individual to win the purple ribbon, indicative of the grand championship of the breed, at a show of that character, and the fact that he has reproduced himself in kind sufficient to win in competition with all breeds is very staunch evidence that present-day Hereford breeders have very closely approached the ideal in their purebred herds.

Farmers and stockmen from this demonstration can clearly see the value of good registered sires in their herds for the more economical production of beef for the market and at the same time study the type of sire which begets the most profitable steers. Furthermore, this lesson is very valuable since it brings to the eye of the breeder of registered cattle the close correlation between the breeder and the butcher.

"Like begets like" is one of the fundamental laws of animal breeding, and this grand champion steer sired by the grand champion bull is one of the finest examples of this law ever witnessed at any great livestock show and is a credit to the breeders and the purebred livestock industry in general.—R. J. Kinzer.

Shorthorn Association Plans.

Districting of the country and asking each district to put up a portion of the money spent in advancing the interests of the breed within its boundaries is announced by the American Shorthorn Breeders' association. It will mean that the breeders of each of the fourteen districts will have a fieldman under their immediate jurisdiction. The association will put up $2 for every $1 raised within the district. The fieldmen selected will have to be approved by the officers of the Shorthorn Breeders' association. W. A. Cochel and J. L. Tormey will continue as general field representatives. District 6 includes Colorado, Wyoming, Utah and Nebraska. Texas, Arizona and New Mexico are included in District 3, and District 4 includes Idaho, Washington, Oregon, California and Nevada.

Boosting the Spotted Polands.

A net gain of more than $11,000 in the receipts for the year 1921 over those of the year preceding was shown in the annual report of the National Spotted Poland Record association. The organization is in a most healthy condition. The sum of $10,000 was appropriated as prize money at the various state fairs and big stock shows. Colorado and Utah state fairs are to get $100 each of this money, which will be duplicated by the fair associations. Breeders of the Spotted Polands are urged to make an effort to show at their state fairs and those of adjoining states. Now is the time to begin to make preparations for these exhibits.

Remedy for Cattle Ear Ticks.

A simple remedy for the spinose ear tick which is causing considerable trouble in the southern part of the state consists of two parts by volume of pine tar and one part cottonseed oil. The mixture should be slightly warmed and poured or injected into the ear with a syringe. Do not use too much pressure if a syringe is used, for there is danger of injuring the ear drum. One application usually is sufficient.

Cattle will not thrive when badly affected with these ticks, and in some instances they may indirectly be the cause of death.

Dickens Shorthorn Sale, March 30.

W. A. Dickens, Longmont, Colo., one of the best known Shorthorn breeders in Colorado, will offer at public sale March 30, at his farm adjacent to Longmont, Colo., forty head of registered Shorthorn cattle, consisting of twenty cows and heifers, fifteen yearling heifers and five bulls of serviceable age. See his announcement in this issue.

Krueger & Pope Sale.

W. C. Krueger and Warren Pope held their annual sale February 21 at Haxtum, Colo. There was offered for sale fifty-two head of Durocs and five head of Hampshires. The average for the sale was over $64. W. H. Fowler, Haxtum, paid the top price of $125. The following purchased animals for $64 or more per head:

W. H. Fowler, Haxtum, Colo., $102.50.
A. H. Hogsett, Yuma, Colo., $70.
F. F. Trumper, Holyoke, Colo., $75.
A. H. Hogsett, Yuma, Colo., $77.50.
Albert Kinzie, Haxtum, Colo., $75.00.
E. Henry, Haxtum, Colo., $67.50.
Albert Kinzie, Haxtum, Colo., $107.50.
J. E. Rugg, Haxtum, Colo., $100.00.
Ray Price, Haxtum, Colo., $70.00.
Gus Stienberg, Haxtum, Colo., $75.00.
Chas. Adamson, Haxtum, Colo., $77.50.
Guy Atkinson, Haxtum, Colo., $72.50.
Dr. Cline, Haxtum, Colo., $75.00.
D. Cline, Haxtum, Colo., $70.00.
Frank Carnes, Haxtum, Colo., $72.50.
C. W. A. Fischer, Paoli, Colo., $72.50.
Ray Price, Haxtum, Colo., $75.00.
Dr. Cline, Haxtum, Colo., $80.00.
L. Bartlies, Haxtum, Colo., $100.00.

This was one of the best purebred sales this season in Northeastern Colorado. The breeders' demand was good, but the local support must not be forgotten, as they were very instrumental in bringing up the average of this sale. Col. C. W. Snook was auctioneer, assisted by Charles Boyd of Yuma, and J. E. Ellis of Holyoke.
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A Correction.

Calcium chloride is not the same as common salt, as was inadvertently stated in a recent issue, in which a calcium chloride solution was mentioned as a commonly used anti-freezing mixture in radiators for winter driving. Common salt is sodium chloride.

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Hogs as Profit Makers.

At the present time hogs are making good money for the man with the corn or other grain to feed them out for market. Fully half of the corn of the country goes to market in the form of pork. When corn is plentiful and cheap on the market, interest in hogs always increases, for the hog carries it to market at a profit. There is always a tendency in the corn states to go by extremes, making plans for extensive pork production when prices are good and dropping out when prices are poor.

Hog growing has not been overdone in Colorado, where they can be grown cheaper than in the Mississippi valley states. It is not a line of livestock production in which extremes should be followed, but rather the adoption of a fixed policy of growing every year some hogs for converting the alfalfa, skimmed milk, and farm grown grain into a product that will bring a better return year in and year out than selling these same products on the market.

One of the writers of our hog letters makes the charge that men haul corn to town fifteen and twenty miles and buy their ham and bacon for home use. Corn at present prices hardly pays for the cost of hauling that distance and buying meat which has gone on foot to the central markets, through the packing houses, and then been hauled back, accumulating the various charges for the services rendered, certainly adds a heavy burden to the cost of living. Every farm, whether in the irrigated sections or on the dry-land, should grow enough hogs to provide the home meat supply. On what proportion of the farms of our readers is this done.

Farmers who have mastered the problems of pork production both under irrigation and on the dry-land farms have written of their experiences in our hog letter contest. We would urge a careful reading of these practical discussions of pork production.

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Beet Men Strengthen Organizations.

The usual skirmishing between beet growers and the sugar factories over the contracts for the beets grown has been going on the past few weeks. Growers say they cannot grow beets at a minimum payment of $4.50 a ton and are refusing to sign the contracts tentatively proposed by the sugar company.

In all the districts served by the Great Western Sugar company, meetings of the local beet growers' associations have been held and the organizations have been greatly strengthened. Heretofore contracts have been individual matters to be handled by each grower as he saw fit. The policy now being followed seems to be to create a real collective bargaining agency of growers. In each district growers are signing contracts with their associations pledging their acreage and definitely authorizing the association to deal for them with the sugar company.

At Loveland 6,500 acres were pledged at a meeting held recently, and the canvass was not completed. In some communities 100 per cent of the growers signed the contracts with the local association. Farmers are ready for cooperative marketing and granting that the sugar company has ample grounds for proposing the contract it is offering, the plan of having a truly representative organization of growers sitting on the opposite side of the table when prices and marketing conditions are being discussed is a big step in advance.

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A Garden on Every Farm.

No half-acre plot on the farm will return greater value than that devoted to a good garden. On many a farm and ranch no pretense is made to have a garden. A garden is a matter of dollars and cents, for without fresh vegetables for the table they must be purchased or canned goods must be resorted to in providing the family with a proper diet. From the standpoint of palatableness there is no comparison between fresh vegetables from the home garden and those purchased either fresh or canned at the stores in town. If you have never had a garden you have missed something.

Having a garden is simply a matter of planning and giving it proper attention. Even under dry-land conditions gardens are possible. If you have not already done so, make your plans this spring to get some of the perennial garden crops started, as asparagus, rhubarb, horseradish and small fruits. Send for seed catalogues and begin to plan for the garden. Many of the catalogues give valuable suggestions on how to succeed with the garden. Pamphlets and bulletins are available at the agricultural colleges and experiment stations on gardening. Work in preparation for the garden should have been started last fall, but it is not too late to begin even now. On account of the short season it is advisable and often necessary to use the hotbed to start plants requiring a long growing season, but most of the ordinary garden vegetables can be planted outside in the usual way. Don't go through another year without a good garden. It means higher cost of living and purchased products cannot compare with those gathered fresh from the home garden.

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County Agent Leader Resigns.

State County Agent Leader A. E. Lovett, who for the past six years has held this position, has given up this work and entered the insurance business in Fort Collins. During the time Mr. Lovett has headed the county agent work of Colorado in the extension service of the Colorado Agricultural college it has steadily grown and developed until Colorado now has one of the strongest forces of county agents in the west.

During the illness of Director H. T. French in 1920 and the first half of 1921, Mr. Lovett was made acting director of extension, serving in that capacity until July 1, 1921, when Roud McCann was appointed to fill the vacancy, Mr. Lovett refused to be considered for the appointment as director, preferring to continue at his former post.

Joining forces with the college when the county agent work was in its infancy in Colorado, Mr. Lovett has seen and helped it grow from almost nothing to a live and wide-awake force of twenty-nine workers. During the war he was especially active in the expansion of the work to enable Colorado to do her share in supplying foodstuffs and raw materials for America and her allies.

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Wheat Poolers Federate.

At a meeting held in Denver recently called by the Northwest Wheat Growers' association, plans were made to bring about a federation of state wheat growers' associations on the 100 per cent pool basis. This grouping of marketing interests which is largely in territory not now occupied by the U. S. Grain Growers, Inc., estimates that it will control 75,000,000 to 90,000,000 bushels of wheat. With the present line-up of these two big co-operative marketing associations there should be no antagonism, for each can develop its own method in a field large enough to provide plenty of constructive work without wasting any energies in fighting each other. Organized grain interests could ask for nothing better than the development of a policy of bitterness and friction between these two agencies.

Why Plant Poor Seed?

There are many things in connection with farming and growing crops over which we have no control, but there is little excuse for putting poor seed into the ground. That is a factor in production over which we do have control, and when we consider the many conditions which we must accept as they come it would certainly seem to be poor policy to neglect doing those things which are within the control of one attempting to co-operate with Nature in the growing of crops.

Colorado farmers are protected against fraud in seeds by law and the adjoining states have good seed laws. In Colorado all field seeds sold or exposed for sale in lots of five pounds or more must be labelled. The label shall give kind of seed, percentage of purity, percentage of germination, date of germination test, place where seed was grown, if in Colorado, name and number per pound of each noxious weed seed in excess of 90 seeds per pound, and name and address of the salesman.

Any citizen of Colorado or any person shipping seed into Colorado for use in the state, may send samples of such seeds to the seed laboratory for test and analysis, such tests and analysis being free of charge. Farmers desiring to avail themselves of this service should send a good two handfuls of seed, wrapping them well, and addressing them to Seed Laboratory, Colorado Agricultural College, Fort Collins.

Last year nearly half of the samples of alfalfa seed sent in for analysis contained large percentages of dodder, one sample as much as 43,800 dodder seeds to the pound. Samples of Kentucky Blue grass have been tseted containing 222,000 crab grass seeds to the pound.

Tests for germination as well as purity are made. This service is for farmers who will avail themselves of the privilege. Many who would not think of buying seed livestock without absolute knowledge as to its quality and breeding continue to plant seed of unknown purity and vitality.

In preparing samples, take seed from each bag or from various portions of the bin, so as to be sure and have representative samples of the entire quantity. Then from these samples take a composite sample to be sent in to the seed laboratory. Not less than two ounces of the smaller seeds should be sent for a purity test and at least 400 seeds of beans, corn and larger seeds.

We would urge our readers to consider carefully this matter of seed purity and do all that is possible to protect themselves from the consequences of planting foul weed seed with their various crops.

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Grain Sales Company Formed.

A new step has been taken in the development of the co-operative grain selling program of the U. S. Grain Growers, Inc. A grain growers' sales company subsidiary to U. S. Grain Growers, Inc., has been formed, which will immediately open its doors for business in Chicago, Kansas City, Indianapolis, Omaha and Minneapolis. The volume of business assured through the contracts of more than 50,000 members makes this agency easily the largest grain selling firm in the world. A most conservative estimate places the grain contracted at more than 110,000,000 bushels a year, and membership is being added at the rate of 2,000 a week, which means adding more than 4,000,000 bushels each six-day period.

The incorporation of this selling company sets up a distinct organization with separate financial responsibility. The plans provide for the appointment of advisory boards from the farmers' elevators and local grain dealers' associations in the territory tributary to the branch offices. These boards are to act in an advisory capacity relative to general management and with respect to local and sectional problems and policies.

The membership of the U. S. Grain Growers, Inc., is concentrated in the states adjacent to the more important market centers. More than 85 per cent of its members are in the states of Illinois, Nebraska, Indiana, North Dakota, Iowa and Missouri.

✦ ✦ ✦

Information Wanted—Lost Boy.

Mrs. J. W. Foust, Route 3, Box 56, Jewell, Kan., is seeking her son, C. N. Foust, who left home two years ago last October and was working in a sugar factory at Longmont. After the season was over he wrote he was coming home and nothing has been heard from him since.

News of the Farm Bureaus

Tax Committee Wants to Know.—E. R. Bliss of Greeley and H. L. Lowell of Castle Rock, who compose the taxation committee of the Colorado State Farm Bureau, are working in close co-operation with similar committees from the Farmers' Union and Grange. They are making a close study of the situation throughout the state and are dependent on the county organizations for definite information so that the matter can be properly presented to the State Tax Commission.

A suggested outline is hereby presented for consideration in the county taxation meetings. It is important that all organizations interested should attend this county mass meeting:

1. Officers should be elected to serve at least one year and money raised to finance a thorough investigation of county expenditures, and help finance a state investigation along the same lines.

2. The county officers should obtain and study a copy of the state tax laws. They should determine the relation of assessed valuation to actual cash values, actual cash values of all land transfers, and make a close study of all county expenditures, including schools, highways, etc.

3. Recommendations should be made as to any changes desired in the state tax law, especially as to appointment or election of State Tax Commission and a state income tax.

4. It is important that this should be done as soon as possible in order to enable the state committee to use the information from each county in making its recommendations to the State Tax Commission.

Taxation problems are receiving national attention at this time and all industries are seeking a readjustment of the tax burdens. The farming industry, by virtue of its importance and because of its curtailed income, is entitled to a deciding voice in the final decision. The individual farmer can make this possible by attending his county taxation meetings.

The following counties have organized and are at work on this problem: Morgan, El Paso, Kit Carson and Weld.

—o—

What Your Farm Bureau Can Do.—The Saguache county farm bureau, in co-operation with its county agent, is responsible for the following improvements:

1. Has made Saguache a source of certified seed potatoes for the west. Inquiries are coming from all parts of the west and one from Massachusetts for Brown Beauty seed.

2. Has fostered and made successful the Valley Potato Marketing association, which has been a direct financial benefit to the potato growers of the county.

3. Has increased the number of dairy cows 15 per cent, the production of eggs 1,000 dozens, the production of certified seed 10 per cent. Has sold two cars of certified seed potatoes at premium.

4. Has made boys' and girls' club work a decided success.

5. Has functioned as the foundation of the Colorado State Farm Bureau and the American Farm Bureau Federation and assisted in their programs of getting the farmers' viewpoint squarely before the general public. The two outstanding accomplishments along this line are the "farm bloc" and the recent farm conference in Washington. The following is a statement frequently heard in all quarters: "The Farm Bureau at the Washington conference had its program well outlined and kept its feet on the ground, and as a result succeeded in its recommendations."

Are not the above sufficient reasons for a strong farm bureau in your county? There are a thousand other reasons just as good, but the most skeptical farmer should need no further inducement to stand by his industry.

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W. M. Cook, Arizona Director of Extension.—In announcing the appointment of Estes P. Taylor to the organization staff of the American Farm Bureau Federation in our issue of February 15, he was referred to as Director of Agricultural Extension in Arizona University. This was in error, for Mr. W. M. Cook succeeded Mr. Taylor as extension director July 1, 1920.

—o—

Livestock Producers' Association Busy.—The board of directors of this association at their recent meeting in Chicago, February 14—17, laid plans for the establishment of co-operative livestock commission associations at five of the leading livestock markets and to seek co-operation with farmers' commission companies already established. This action was deemed advisable in view of the marked success of the commission firm recently opened at St. Louis.

Before establishing these associations, hearings of the livestock producers tributary to those markets will be held for the purpose of nominating the officers and board of directors of each association. From these nominations the directors of the National Livestock Producers' association will select the directors of the terminal associations. Chas. E. Collins of Colorado, A. Sykes of Iowa and O. O. Wolf of Kansas were appointed a committee to endeavor to secure the co-operation of existing farmers' companies at the leading markets under the national plan.

A committee was appointed to appear at a hearing of the railroads and advise them that it was the recommendation of the National Livestock Producers' association that standard gates be furnished with all livestock cars as a part of the regular equipment furnished by the railroads. Director O. O. Wolf and Attorney Newton Jenkins composed the committee.

Living up to their determination to handle business on a cost basis, the directors ruled that as soon as sufficient surplus and reserves have been accumulated all membership fees will be returned. Membership fees are thus to be

(Turn to Page 10.)

From the Nation's Capital

CONGRESS CONSIDERING MANY PROBLEMS THAT ARE OF INTEREST TO FARMERS AND STOCKMEN.

E. E. Reynolds.

FOR more than a month Congress has been centering its attention upon the soldiers' bonus and the means to be provided for raising the money with which to pay the bonus. No question that has come before Congress in a long time has been more fruitful of worry and sleepless nights in the vicinity of Capitol Hill. With election only a few months away the average congressman is deeply concerned in regard to the effect of the bonus legislation upon his chances of re-election.

President Harding's suggestion that the money for the bonus be raised by a sales tax has resulted in a decided slump in bonus sentiment. If the "eight-point" limited sales tax proposition was unpopular, there is no word in the dictionary sufficiently expressive to characterize the disapproval of the general sales tax.

The friends of the sales tax in Congress took advantage of the President's suggestion to boost their system of taxation to the front, but without avail. Owing to the aggressive fight in opposition made by the agricultural blocs headed by Congressman Frear of Wisconsin and Senator Arthur Capper of Kansas, Dr. T. C. Atkeson, Washington representative of the National Grange; Gray Silver, Washington representative of the American Farm Bureau Federation, and other farm organization leaders, the sales tax was rejected by the majority members of the ways and means committee by a vote of 7 to 2. While attempts are being made to put through some sort of sales tax proposition, there is little chance of its passing Congress. Thirty majority members of the House of Representatives have signed a joint letter addressed to the Ways and Means committee, urging the use of the proceeds from the refunded foreign bonds for the bonus.

Senator Gooding of Idaho says the bonus bill will pass without any provision for raising the revenue. Others say that a provision that interest on the British bonds be used in payment of the bonus will be attached to the bill. Members of Congress who are in close touch with the situation hold the opinion that the bonus bill will pass the House, but will not pass the Senate this session, or if it passes the Senate it will die in conference.

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Farmers Lose True Friend in Congress.—The resignation of Senator Kenyon of Iowa has lost to the farmers a true friend in Congress. His successor, Senator Charles A. Rawson, has announced, however, that as Iowa is strictly an agricultural state, he will use his efforts to promote the best interests of agriculture. Senator Capper has been elected by the agricultural bloc as chairman to succeed Senator Kenyon.

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Congress Still Unable to Agree on Tariff Bill.—The Senate and House have been unable to come to an agreement on the tariff bill. The Fordney bill, as it came from the House, is based on American valuations. The Senate finance committee has agreed tentatively on continuing the present system of foreign market valuations. This means a long darwn-out discussion, which may prevent the enactment of a permanent tariff law this session. Chairman Fordney of the House ways and means committee declares that he will never agree to any foreign valuation plan, and his committee is backing him in his position. Chairman Fordney says that if the Senate sends a bill to the House based on foreign valuations, the House ways and means committee will write a new bill on the basis of American valuations and send it to the Senate. The latest move is an effort to effect a compromise. Speaking for the farm bloc, Representative Dickinson of Iowa says the bloc will insist on sufficient protection on agricultural products to give our wheat preference over Canadian wheat, our sugar preference over Cuban sugar, our cattle over Brazilian cattle, and our lambs preference over Australian lambs.

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A Bill Regarding the Forestry Bureau Transfer.—A bill introduced by Congressman Tincher of Kansas transfers to the Department of Agriculture the administration of all public lands and reservations, including the national parks, national monuments, abandoned military reservations, land withdrawn for reclamation purposes, Indian reservations, fishing stations, now vested in the Secretary of the Interior, the commissioner of the General Land Office, director of National Parks, director of the Reclamation Service and the commissioner of Indian Affairs. In discussing this bill Representative Tincher said he did not think a worse calamity could happen than to have the Forestry Bureau turned over to the Interior Department. His plan is to have all the government functions affecting agriculture, forestry and food and government owned lands centered in the Department of Agriculture. Hearings on the Tincher bill will be held at a later date.

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Considering Giving More Help to Experiment Stations.—Hearings on the Purnell bill, authorizing the more complete endowment of agricultural experiment stations, have been in progress, with several experiment station directors and officials giving testimony in its favor. The bill provides for an appropriation of $15,000 in addition to the sum now received by each state agricultural experiment station for the fiscal year ending June 30, 1922; $25,000 for 1923; $35,000 for 1924; $45,000 for 1925; $55,000 for 1926; $65,000 for 1927; $75,000 for $1928; $85,000 for 1929, and $85,000 for each fiscal year thereafter. This would mean, if the bill becomes a law, an ultimate increase of $4,080,000 a year for the forty-eight experiment stations in this country.

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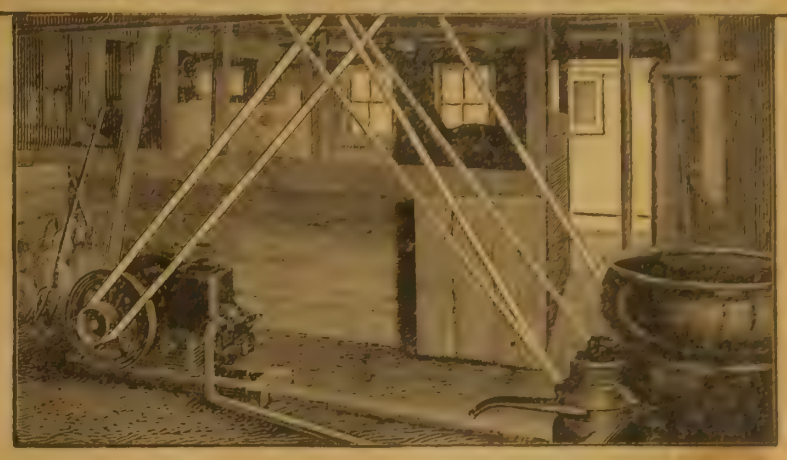
Commission Reports on Transportation Problems.—The Congressional Joint Commission of Agricultural Inquiry, of which Representative Sydney Anderson is chairman, has prepared an exhaustive report of its findings on transportation in its relation to agriculture. Before concluding the report and recommendations to Congress, every paragraph was carefully studied and discussed by an advisory board of transportation, representing agriculture, industry and commerce. Among the members of this board representing agriculture were President J. R. Howard, Gray Silver, Washington representative, and W. G. Jamison of Colorado, of the American Farm Bureau Federation; T. C. Atkeson, Washington representative of the National Grange, and Milo D. Campbell, president of the National Milk Producers' Federation.

::::

Considering Bills to Aid Farmers in Drouth Sections.—The House commmittee on agriculture has been considering several bills designed to give aid to farmers in sections of the Northwest in which there were crop failures last season because of drouth. One of these bills which has already passed the Senate, authorizes the Secretary of Agriculture to make loans to farmers for feed to relieve animals in the crop failure areas, and for the purchase of seed grain for the 1922 crop. The appropriation calls for $5,000,000 and the total amount of such loan to any one farmer shall not exceed the sum of $300. Another bill seeks to define a crop failure in the drouth stricken region as follows: Wheat, five bushels or less; oats, fifteen bushels or less; barley, ten bushels or less, and flax, three bushels or less. It is provided that those farmers who borrowed money from the government under the Wilson war loan resolution of 1918 and whose crops were equal to or below these fig-

(Turn to Page 17.)

DAIRY PROFITS—AND GOODYEAR BELTS



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GOODYEAR

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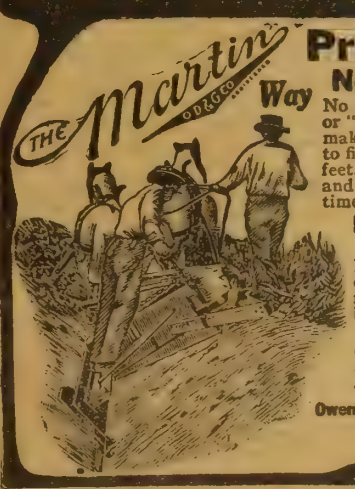

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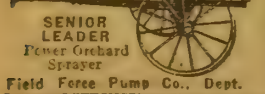

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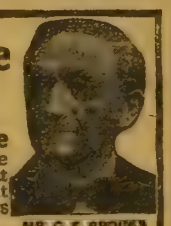

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Farmers Write Tractor Letters.

Let farmers who have had practical experience tell of the results they have obtained and the conclusions they have drawn, is the policy we wish to follow as far as possible in handling questions of farming practice. As a reward for the time and trouble necessary to write of their experiences we offered some prizes for letters on tractor operation. The best letter received is from Sam C. Cook, Kit Carson county, Colo., and he receives the first prize of $5; second, $2, goes to J. Lewis Halls, Montezuma county, and third, $1, to L. E. Larsen, Morgan county. Raymond McGowan of Weld county receives honorable mention. Probably others of our readers will differ with the writers of these prize letters. We hope to receive other letters from farmers discussing the questions raised. The letter from Mr. Cook follows on this page.

Keeps Tractor Busy.

I have used a tractor ever since they came into us and have been very successful in operating them. I have owned two-, three- and four-plow outfits, and a ten-plow outfit. I find the three-plow outfit the one to recommend as a standard size for the average-sized farm. When you own a tractor you want it to do more work than you can do with four or six horses in the same time. You cannot do this with a two-plow outfit. There is little difference in using the two sizes on small fields, for the larger one will go anywhere the small one will go. You also can pull a packer behind the three-plow size. With the smaller one the packer has to be so small as to be unsatisfactory.

When you seed with a three-plow tractor you can pull a tandem disk and drill. The two-plow size will not do this. In harvesting you can pull a combine harvester and a grain wagon alongside. These are a few of the advantages of the larger size in ordinary farming operations.

There are a great many other uses for a tractor besides field work, such as threshing, filling silos, sawing wood and lumber, shelling corn, grinding grain, shredding fodder, pulling a husking machine and maintaining highways. These are all jobs which cannot satisfactorily be done with the two-plow size without overloading, which is not good for the machine.

My nine years' experience in Nebraska and eastern Colorado has not convinced me that the three-plow size packs the soil any more than the smaller size and I consider it without question the cheapest size to operate.—Sam C. Cook, Kit Carson county, Colo.

Locating Engine Troubles.

Learn to stop and reason as to the probable cause of any trouble which develops, is the advice given in a government bulletin giving practical hints on the running of a gasoline engine. In most cases where the engine stops, loses power or performs irregularly, some indication of the caue will be apparent to anyone familiar with the outfit if he studies the problem intelligently. Such study will enable one to avoid needless tinkering with parts that are working properly. Even if the cause of the trouble be not apparent after a little reasoning, no attempt should be made to locate it by a general change of adjustments or haphazard tinkering which is frequently the method followed.

It is also a good plan to follow a definite system when endeavoring to locate gasoline engine trouble. Not only will this go far towards ensuring success in locating the difficulty, but it will usually save time, for as a rule the trouble will be located in once going over. Nearly all experienced operators in hunting for the source of any trouble with a gas engine, follow, whether consciously or not, a more or less uniform system of tests. Just what order these tests should take will depend on the particular make and type of engine. Tests which can be made most quickly and easily should, of course, be made first. The instruction book supplied with the engine offers valuable suggestions for locating such troubles as may occur.

America is almost the only nation where the average man can save money and still enjoy a high standard of living. On that account Americans should be the most thrifty people on earth.

Two Crops From Garden.

ESTHER ELLIS REEKS.

Intensive gardening on a small tract will return an astonishingly large amount of produce. From a number of years of experience we have worked out a system of replanting which gives two harvests each season from the greater part of our garden. Our acre garden is a market proposition, but the plan will work as well with a home garden plot.

Sweet corn, tomatoes and celery, are the three things that bring us the most money, with spinach, late cauliflower and turnips making the second trio in point of returns. All vine crops require a full season, therefore the space given to tomatoes is given over to them exclusively.

Beginning about the middle of February and continuing through March, we sow spinach at intervals of about a week on ground which is later to be used for celery, cauliflower, cabbage and late plantings of sweet corn. Celery and cauliflower require very rich soil, and any spot that will produce these produces also very thrifty spinach, while the growing of spinach upon it serves to keep down weeds until such time as it is needed for the later crops. Lettuce and radishes also are planted early in March, and come off about the same time as the spinach.

The first spinach is ready for cutting about the middle of May, and by the end of the first week in June the last is well off. As soon as any piece of ground is cleared of this crop it is turned over with a wheeled hand cultivator and set to a later crop. Cauliflower plants do well to go in any time up to the middle of June, as do also late cabbage. Early varieties of sweet corn are excellent for late planting any time up to the end of the first week in July, while celery does best with us set out from the first week in June to the beginning of the second week in July.

A good proportion of our ground goes each year into sweet corn. For the main crop, we have until last year planted Peep o' Day, a small, hardy, white variety of good flavor. After trying out a small quantity last year, we gave the preference to Child's Sixty-day Makegood. This is a much larger sort, equally as hardy and coming into use a full week earlier. Either of these can usually be put in with safety in our locality—Boulder county—about April 20. A week later we make a planting of Golden Bantam, a yellow sweet corn much preferred to the white by many, but more susceptible to late frosts. These same varieties are used for the late plantings after early vegetables, including the earliest peas, as they give us roasting ears in late October when put in early in July.

By the middle of July, or very soon after, the first of the corn is ready for use, and in two weeks' time it is nearly over. As soon as the greater part of the patch of either early white or early yellow has been gathered, the hand cultivator is again brought out and run between the rows, and turnips are sown broadcast. By the time these are well up the corn is cut and out of the way.

Most root vegetables require a rather long season. Carrots, however, are an exception to this rule, though they require earlier planting than turnips and are far less satisfactory to raise as an extensive crop. After July 5 turnips are the only thing we plant. Up to July 25 it is safe to plant the White Egg turnip. Purple Top Globe require a week or two less time to mature, and consequently may go in that much later, while Extra Early Purple Top Milan will be ready to pull by the first of November if planted as late as the last of August.

By following such a system as this, coupled with one of thorough cultivation and fertilization, we find that an acre of ground can be made to yield large returns.

Lack of Lubrication Expensive.

Watch the lubrication of your automobile or tractor and save money. It is cheaper to buy oil than to buy machinery. Use only lubricants of the best quality. The manufacturer will advise you which brand of oil is best for the particular machine. Keep oils and grease protected from grit and dirt. See that all oil containers are cleaned before using. Carefully follow oiling chart in lubricating your machine. A small amount of oil at regular intervals rather than an excess of oil occasionally is best for all machinery.

The wear and tear on a tractor plowing one acre is equivalent to running an automobile one hundred miles.

Death of G. Harold Powell.

In the death of G. Harold Powell the farmers' co-operative marketing movement loses one of its outstanding leaders. Mr. Powell had been manager of the California Fruit Growers' Exchange which he had developed into one of the most successful co-operative marketing institutions in this country. He has been considered by many to be the most able man in the field of co-operative marketing. He has never been interested in mushroom growths in marketing methods. He has recognized the limitations of co-operative effort and has moved forward slowly but surely in developing a system based on the most careful surveys of the field. His book, "Co-Operation in Agriculture," is a classic. We will print in a later issue extracts of the address he made on co-operative marketing at the agricultural conference in Washington. His death occurred very suddenly February 18.

News of the Farm Bureaus.

(Continued from Page 8.)

regarded merely as temporary loans to underwrite the work of the National Live-tock Producers' association.

In view of the propaganda and falsehoods being circulated by livestock exchange interests in their efforts to defeat the co-operative marketing plan, the directors have issued a statement clearly outlining the policies of the new organization, so that all livestock growers may fully understand the advantages of the co-operative associations and the developments that lead up to their organization. This statement can be obtained by writing to 608 S. Dearborn St., Chicago, Ill.

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Growth of U. S. Grain Growers.—Membership in the U. S. Grain Growers, Inc., is increasing at the rate of more than 2,000 a week, and Secretary Frank M. Myers reports that "Our chief difficulty in connection with organization work is that of extending the work fast enough to meet the demands of interested growers." The total now is 47,387, and most of the new members last week came from Indiana, Iowa, Illinois and Nebraska.

At the hearing in Washington on the $250,000 slush fund, the grain dealers are making a persistent effort to justify their opposition to co-operative marketing. Chas. Quinn, secretary of the Grain Dealers' National association, in his testimony criticized Secretary Henry C. Wallace for his failure to "check the pernicious activities of farm bureau county agents."

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Contest for Farm Bureau Letters.—In its March issue "Farm and Fireside" will print the following: "The American Farm Bureau Federation celebrated its second anniversary this month. These two years have been full of trials and tribulations, defeats and triumphs for the American farmers. It has been one of the most trying times in the history of American agriculture. Has the farm bureau done anything for you? Come on and tell us what your experience has been. We will pay for the best letter $10, for the next best $7.50, and $2 for all others that are used. You need not be a subscriber."

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Oregon to Have 25,000.—Secretary-Treasurer William A. Aird of the Oregon State Farm Bureau Federation states that the organization campaign in that state is making great progress and by the end of July will have rolled up a membership of at least 25,000.

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No Injunction on Packer Control.—The United States District Court, sitting in Chicago, has denied the petition of various livestock exchanges seeking to restrain by permanent injunction the Secretary of Agriculture and the district attorney from enforcing the packer and stockyard control act. The United States Supreme Court will decide the test case involved. The district court issued a notification to the effect that the act will not become effective before January 18.

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Selling Charge Cut in Half.—On January 19 the Central Co-Operative Commission association at South St. Paul, Minn., declared a 25 per cent patronage dividend, which amounts to more than an 8 per cent stock dividend. The issuing of the dividend, according to the Minnesota Farm Bureau Federation, means that the Central Co-Operative Commission association has handled the largest volume of business on the South St. Paul market at one-half the cost of marketing it through non-co-operative agencies. The total amounts to $19,124.22. Its total receipts in commissions amount to only $73,360.85 according to state auditors. The payment of the dividend constitutes a return to the farmers of one-fourth of all the money they have paid to their central selling organization for handling their livestock. The actual saving to farmers is twice the amount of the dividend, because the farmers' association has handled the farmers' livestock at commission rates approximately 25 per cent lower than the prevailing charges. After paying the dividend and all expenses, the marketing agency will have a surplus of several thousand dollars. The dividend amounts to $2,349 more than the total paid-in capital of the association. Records of the Minnesota railroad and warehouse commission show that from August 8 to December 31, 1921, the farmers' agency handled 4,424 cars of stock. No other firm on the market handled as large a volume of business during the whole twelve months of 1921. The same records show that in its first five months of operation, the central agency handled 35,715 cattle, 29,450 calves, 193,845 hogs and 36,902 sheep. The total business for the five months amounted to 295,912 head of livestock, with gross value of more than $5,000,000.

Report on Dicklow Wheat.

For spring planting on the irrigated farms of Southern Idaho, Dicklow wheat is recommended by C. B. Ahlson, acting field agronomist and state seed commissioner. This is a high-yielding, soft white wheat which has proved its worth. Experiments conducted on the Aberdeen experiment station at Aberdeen, Idaho, over a period of five years showed Dicklow to outyield all other varieties 5.1 bushels per acre. In the counties where this wheat has been grown an increase of from 5 to 33 bushels has been recorded.

Growers are urged to buy certified seed. The results of certified seed can best be shown by tabulating figures obtained in one county. Records have been kept on production of certified Dicklow wheat in Twin Falls county which show that an average of 3 bushels of Dicklow wheat from uncertified seed was produced per acre on the irrigated farms of that country in 1920. During the same season the certified Dicklow wheat growers of that county produced an average of 55 bushels per acre.

It is pointed out that planting certified seed would cost 90 cents more an acre. If the increase were only one bushel to the acre the price of the seed would be more than paid for and there would be no cut at the mill for mixtures. The increase is usually 5 to 10 bushels.

Information concerning certified seed can be obtained from any county agent or the state seed commissioner, Boise, Idaho. The results so outstanding in the growing of Dicklow wheat apply equally well to other certified grains recommended after thorough trial by the university of Idaho. Trebi barley—a spring variety for the irrigated sections; Early Baart wheat for spring planting on the dry farms—Idamine oats for the irrigated sections; Jenkins club wheat—principally for Northern Idaho; and Turkey Red wheat—the standard winter wheat for dry lands; White winter barley—for Northern Idaho; are all recommended the best grain available for conditions in this state to date.

Need More Brood Sows and Pigs On Our Farms.

(Continued from Page 3.)

able the sow to pile it up much. As long as the pen is kept clean and dry I usually have been able to avoid filth infection of the pigs' noses and tails. I used to try to be present at farrowing, but have come to think it unnecessary. The sows usually lose one or two in spite of anything, but if there are plenty in the first place it does not matter much. I believe that taking pains to have pigs born strong and able to take care of themselves through judicious care of the sow, is more effective in saving pigs than anything that can be done after they are born. I have never been successful in making a runt anything but a runt. I have tried holding a big pig away to give the runt a good teat and trying to make them drink cow's milk, and have seen others try such methods as cutting off their tails or their teeth. Results were always a flat failure, so I raise more pigs and don't worry about the runt.

Feeds Pigs Skim Milk.

As soon as pigs are big enough to drink I have usually been able to give them a limited amount of skim milk. When sows are nursing pigs and sometimes during gestation I give them a little tankage. Alfalfa hay helps out a little in the winter. Outside of this the feed is usually corn and ground hog millet mixed in slop. Analysis show that this millet is rather rich in protein and therefore of some value as a supplement for corn. It is also a feed easily grown here. I do not consider it practical to feed tankage or other purchased feed to shoats at present prices. The last time I bought tankage a hundred pounds of it cost me just thirteen times as much as a hundred pounds of hog millet, and I do not suppose anyone will claim that a pound of tankage will make as much pork as thirteen pounds of millet or any other grain, not to mention the cost of hauling it. I aim at a little over 200 pounds as a marketable size, but usually sell them when the selling is good.

I have never had to ring a hog. Hogs well cared for do not usually root much, but if they do I let them root. I believe the great trouble you hear about of rooting in hogs is due to nervousness, not of the hogs, but of the keepers. I do not use anybody's prepared hog food or patent worm medicine. If the hogs get lousy I sprinkle them with some crude oil, but have not had any trouble with lice for two years. I clean the pens if they get dirty, and if the hogs have any worms I haven't found it out yet. Ordinarily I do not vaccinate, although one year I had to. Our hogs never eat chickens because I keep them far enough away so that the chickens do not go in the pens.—Hilton A. Smith, Morgan county, Colo.

Sell Alfalfa on Legs.

SECOND PRIZE LETTER.

The best way to sell alfalfa is to put legs on it and sell it through hogs, and I believe that hogs and alfalfa are the combination that is going to turn the trick for the Colorado framer. Why go to the trouble of raising alfalfa for the hay market at from $3 to $5 a ton, which doesn't begin to pay for your labor, when you can turn every acre of your alfalfa into a handsome profit through hogs and build up your land in the bargain? And the best part of it is that the pigs do all the work.

In 1917 I began raising hogs by purchasing four grade Poland China sows bred for early spring litter, paying $110. Two of these sows proved not to be with pig, so they were fattened and sold on the market for $84.63. At the close of 1917, I had the two old sows and one gilt which I had picked out to save for a brood sow. I valued these three at $100. I also had nine stock hogs valued at $250, and one fall litter of seven pigs worth about $5 each, making a total of $385.

In March, 1918, I bought four more sows for $155, and during that year I sold at different times twenty-two hogs on the market at from 16 cents to 17 cents a pound, for a total of $1,013.04, and had left January 1, 1919, thirty-eight pigs and hogs of different ages. Market prices were high at that time due to the war, and these thirty-eight head inventoried at $970. Among them were ten brood sows worth $400.

Hog prices soared the first six months of 1919, and on June 9, I sold twelve head of late fall pigs weighting 2,710 pounds at $21.15 a hundred, which is the highest price I ever received for market hogs. However, by December, prices were on their way back to normalcy and market hogs were only worth about 13 cents. My sales of market hogs for the year totaled $1,580.20, and my inventory at the close of the year was practically the same as it was to start with.

Started With Purebreds.

It was during 1919 that I decided to make a start with purebred Durocs. I purchased two purebred Duroc Jersey sows in July, 1919, bred for fall litters, paying good prices for them. One of these proved not to be worth any more as a brood sow than the grades I had been keeping, so she with every one of her pigs went to market as soon as they were in shape to sell. The other one, however, was a more profitable investment. She raised eight fine pigs out of a litter of ten, and six of these were good enough to register and sell as breeding stock. Four of these were boars and by inserting a small three-line ad in my home paper, I soon disposed of them to my neighbors for $270 and the two gilts for $50 each.

In February, 1920, I purchased three more purebred sows bred for March litters. One of these was entirely too fat and two days after farrowing died of paralysis. I found that orphan pigs are mighty hard to raise and out of her litter of eight I only raised one pig, and it grew so runty that it had to be sold on the market. This sow, on which I was counting for something pretty good as she had quite a show record, was a big loss.

As we were moving to a smaller place early in 1921, I sold all my hogs except four of the purebred gilts. Sales of purebred hogs for 1920 totaled $840 and the market hogs sold during the year brought $1,319.56.

My sales in 1921 were very small compared to other years. One of the gilts was hurt in moving and did not raise any pigs, and the other three raised only twenty. As I am again on a larger place, I am saving half of this number for breeding purposes. Five were sold for breeding purposes and five were fattened for the market.

The best place for brood sows is a run on alfalfa pasture the year around. I find that exercise is one of the essential requirements, and a sow can't take exercise in an eight-by-eight pen. A sow demands feed rich in protein, and it is not surprising that when a sow is fed almost exclusively on corn, she is nearly crazy for protein and eats her own young. Alfalfa furnishes protein more cheaply than anything a Colorado farmer can buy, and if you can't turn your sows out on alfalfa pasture, be sure to feed them alfalfa hay.

I keep a record of the date of service on all my sows and so know just when to expect the pigs and am always ready for them when they arrive.

Old Sows Best Mothers.

Gilts, I have found, do not farrow as good or as large pigs as old sows. I never let my gilts raise but one litter a year until they are two years old. After that, they raise two litters a year. A week or two before farrowing time, I put the sow in an individual house at night and watch they very closely during the day. I feed her bran during this time to keep the bowels open. Handled in this way sows rarely have trouble at farrowing time.

I have the spring pigs arrive as near March 1 as possible and the fall pigs about September 1. If the weather is cold at farrowing time, it pays to be right on the job to see that the pigs are not chilled. I get them dried as soon as possible and then clip off their teeth with a small pair of nippers to prevent their fighting over the eats and biting the sow. A person will be surprised to find how quiet and gentle a sow will be where this is done.

Before I put the pigs back with the sow, I earmark each one so that I can always tell the mother of every pig. My records show sire, age, how many were in the litter, how many were raised and any other thing that is necessary to know about them, in case I should want to use them or sell them as breeding stock. In this way, I can always pick my future brood sows out of large litters, and so keep up my high average of big litters. My old sows farrow from seven to thirteen with an average of nine, and the gilts farrow from six to ten, with an average of eight.

A person must be careful at this time not to feed the sow too heavy, as heavy feeding will start the milk faster than the young pigs can take it during the first week or so, which is liable to cause scours. All a sow needs for the first twenty-four hours after farrowing is a little warm water with possibly a little bran added. The quieter she can be, the better.

Another important point, is not to have too much bedding in the pen, as the little fellows are liable to get tangled up in it and be mashed when the old sow lies down. I also have guard rails on each side of the pen about six inches from the floor, which gives the pigs a chance to escape should the sow lie down next to the wall. The bedding should never be allowed to get wet or dusty.

Castration should be attended to when the pigs are about six weeks old and still with the sow, as they will not be set back as much at that time as they will later on.

Use Self-Feeder.

I make a "creep" and feed the young pigs there as soon as they are old enough to eat and when weaning time comes, they are so used to eating grain that they never miss their mothers. I feed them by means of self-feeders containing cracked corn or barley and tankage, and this with their run of alfalfa pasture literally makes their tails curl. The September pig has a better chance to get a flying start than the March pig, as he is born in more favorable weather and the pasture is nice and green. He does not need as warm a shelter nor so much attention as the spring pig and for these reasons, he is a cheaper pig at weaning time than the March pig. The spring pigs are ready for market in September at about 200 pounds each and fall pigs bring in some ready money in March or April.

Profit $5.15 a Head.

Feeding costs and net profits during the last five years have varied greatly, but after deducting every expense, including labor, feed, interest, taxes, vaccination charges and death losses, I find that the average profit on my market stuff has been $5.15 a head. I see no reason why that average cannot be maintained during the next five years, for right now there is a better margin above feeding costs than during the war prices. You can put on at least half the flesh with cheap alfalfa pasture and thus cheapen the cost of production—in other words, grow it on the hog. And it is cheaper to grow it on than it is to feed it on.

But a man raising purebred hogs does not need to sell all his stock at market prices, for he has two ways to jump. And a man might just as well raise purebred hogs as purebred spuds. No farmer would think of buying seed potatoes of Rurals, Pearl, and Early Ohios and then mix them all up and plant them with the hope of producing high class seed to be sold at fancy prices, for it can't be done. Neither can hogs of mixed breeding bring more than market price, and even on the market they don't bring the top.

Cleanliness, pure water and exe[illegible] are the three things that cost the least and yet mean the most in successfully

(Turn to Page 20.)

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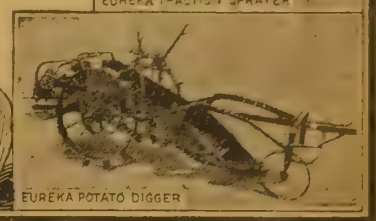

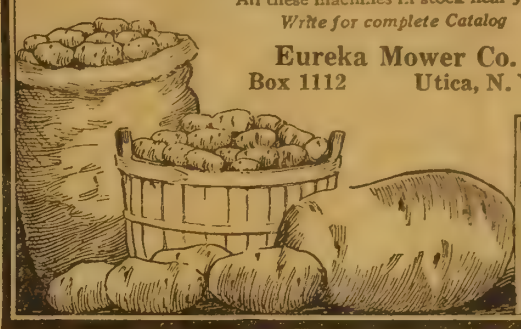

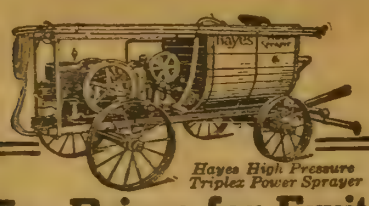

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Grass Mixture for Pasture.

What pasture grass mixture is recommended for irrigated land?—H. S., New Mexico.

The grass mixture now advised by Professor Geo. W. Morton of the Colorado Agricultural college, which has been very successfully used, is as follows: Orchard grass, 15 pounds; awnless brome or bromus inermis, 15 pounds; meadow fescue or English bluegrass, 10 pounds; timothy, 6 pounds; yellow sweet clover, 4 pounds.

It is well to remember, points out Professor Morton, that a pasture of native grass is not good for dairy stock when it is not supplemented with a legume plant such as alfalfa. However, when alfalfa is fed, the combination does very well. It is also to be understood that grain is to be fed, for without it the cow cannot obtain food enough to produce her best. When pasturing sweet clover, care must be taken to keep the cows off of it when it is wet or damp, for it will cause bloat. It is not so bad as alfalfa, but numerous cases of bloat have been reported from Rocky Ford. The age of the plant does not seem to have any effect, for it seems to bloat as bad when young as when old.

On low-lying wet soils reduce the orchard grass and grome grass, adding some timothy and red top. Heavy seeding is necessary to get an early sod. In order to get a firstclass pasture a perfect stand must be obtained, so take pains with it. Sow with a light cover crop and remove the crop as soon as cut. Take a crop of hay the second season to allow the grasses to become well rooted before pasturing. For horses or hogs use alfalfa pasture, or in high altitudes a mixture of alsike clover and timothy.

Claim to Water Right Forfeited.

If a ditch and water right was proved up on by four parties, three of whom never had ditches to their land nor stood any share of expenses in building or upkeep of ditch, would any of these three have a right to water or the ditch after thirty years' use by the owner of the other one-fourth interest? If so, would they have any right to a portion of the water if there was only enough to supply one-fourth of the decreed amount?—J. R. O., Huerfano county, Colo.

If the facts are as presented by you, the party who constructed the ditch, or paid for its construction, could undoubtedly hold that the other three parties have abandoned any claims or rights that they may originally have had. Apparently they never acquired any rights or rights whatsoever to any of the water, beneficial use being the basis and measure of the right.—A. Lincoln Fellows, Senior Irrigation Engineer, Denver.

Wants to Be Wireless Operator.

Where can I get information in regard to becoming a wireless operator?—H. W. R., Yuma county, Colo.

Write to the National Radio Institute. 1345 Pennsylvania Ave., N. W., Washington, D. C.

Must File for Water Right.

I have a ranch located by a stream but haven't a water right. Is a person allowed by law to take water out of said stream by a ditch for a garden and orchard to raise vegetables and fruit for ones own use? Is a person allowed to use water out of the stream for irrigating a meadow when the stream is flooded from heavy rains?—E. O. M., Larimer county, Colo.

You have the right to divert the water by ditches or otherwise for the purposes stated, but only subject to the prior rights of others, unless the water originates, as from springs, seepage, etc., on your own place, in which case you could take the water without regard for others. If the water originates above your land, you should make filings for both of the purposes named with the State Engineer of Colorado. The statutes of Colorado prescribe the methods for acquiring water rights, and the administration of the laws relating to the diversion of water are under the State Engineer and his subordinates. For instructions and forms of application address State Engineer, Capitol, Denver, Colo.

Under the conditions described by you, you would undoubtedly have the right to take water for domestic use, returning the surplus to the stream, and without using any of it for irrigation, without making a filing.—A. Lincoln Fellows, Senior Irrigation Engineer, Denver.

Water Needed to Cover Acre.

How many gallons of water are required to cover an acre one inch? I am planning to irrigate an acre-patch for garden and need to figure on pump cacacity. Where can information be obtained on sub-surface irrigation.—G. S., Yuma county, Colo.

An acre-inch of water is 27,154 gallons. You can obtain a number of valuable bulletins on irrigation from the Colorado Agricultural college, Fort Collins, including one entitled "Irrigation by Means of Underground Porous Pipes." A bulletin published by the United States Department of Agriculture, entitled "Farmers' Bulletin 263, Practical Information for Beginners in Irrigation," will be helpful, and if still available can be obtained by addressing Superintendent of Documents, Department of Agriculture, Washington, D. C. —G. C. W.

Generating Electricity With Wind.

A year or so ago an article appeared in Western Farm Life telling about two brothers in North Dakota who made a windmill plant for generating electricity. We are interested in learning about plants using wind power.—H. J. L., Weld County, Colo.

George and Wallace Manskowski, Mooreton, N. D., are the men who made the windmill generator referred to. The engineering experiment station at the Kansas State Agricultural college began some tests in using wind power to generate electricity before the war. These tests were discontinued due to the many extra duties forced on the engineering division during the war period. Professor C. E. Reid writes as follows concerning the results and the opinions of those conducting the work:

"It was our conclusion that the windmill electric plant would cost about 50 per cent more than a gasoline engine plant; that it would not be quite so satisfactory because there would be some periods during the year in which for from nine to seventeen days at a time the wind would not blow strong enough to generate any electricity. It took about a nine mile wind to develop very much electricity, and at this velocity the amount generated was very slight indeed. It took a fifteen-mile wind to raise the power to that of one of the smaller gasoline engine plants. The maintenance on this plant would be more than that on a gasoline engine plant and would not be so well taken care of since it would be harder to get at and the parts would be more exposed to the weather. The supply of power would not be so regular and might possibly not be available when wanted.

"There have been a number of plants which have been reported as being satisfactory and successful, one of which was the North Dakota plant built by Manskowski. Unfortunately, articles which many times appear in the Popular Magazine, I believe, are articles written by those who are not engineers—more by people who are semi-scientific—just enough to use the language to write an article. These writers seize upon an idea which is considered to have possibilities and immediately proclaim it to the world as being a certainty in order that they may sell their articles.

The most promising item which has appeared on the windmill electric generator proposition is a notice in the technical electric press that the Perkins Windmill Company, of Mishawaka, Ind., and the Westinghouse Electric & Mfg. company of Pittsburgh, Pa., have combined and designed a plant. Because both of these companies are high grade manufacturing companies, I am inclined to feel hopeful that they will have developed something worth while, but as yet I have no first hand information.

"We decided in our experimental tests that ball or roller bearings of some kind were absolutely necessary for all parts of the windmill, and as we could not afford to have a windmill head cast big enough to make these bearings, this hampered our experiment somewhat, while these big companies can readily absorb such an expense and if they put roller bearings everywhere, they will doubtless have more success than we did."

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Payment of Grazing Fees.

Advance fees for livestock grazing on the National forests will not be required this year, according to a statement just issued by the Forest Service. Ordinarily all grazing fees are due and payable thirty days before the opening of the grazing season. This year, however, the Secretary of Agriculture has waived this provision, and payments may be made in two equal installments: One-half will be paid on or before the time stock enter the forest range, and one-half on or before December 1, 1922. No interest will be charged on deferred payment.

Grazing permits will be issued at the time of first payment, but each permit will contain a stipulation that failure to make final settlement by December 1 will be cause for the revocation of grazing preference, together with the institution of legal action for the collection of the value of the forage consumed.

In 1921 over 38,000 livestock owners grazed 2,129,500 cattle and horses, and 7,455,600 sheep and goats largely in the National forests of the Western Slope.

Better Sires Campaign Progress.

With exactly 5,900 persons enrolled in the "Better Sires—Better Stock" campaign at the close of the calendar year 1921, records of the United States Department of Agriculture show a continued interest in this work, which has extended to all states and several island possessions. During the year the number of livestock owned by the persons enrolled increased from about 400,000 to 750,000. The figures include both male and female stock. All of the males are purebred, and the females, which may be of varied breeding, are bred in all cases to purebred sires.

It is noteworthy that 56 per cent of all the female stock listed in the better sires campaign are purebred. This figure is 1 per cent higher than a year ago. The effect of the use of purebred sires in reducing the number of scrub animals on farms is shown by the small proportion of scrubs in herds and flocks headed by purebred males. The figure at the end of the calendar year 1920 was 2.1 percent and for 1921, 1.9 per cent scrubs in such herds.

Livestock owners in 548 counties, and, in addition, in the islands of Guam and Porto Rico, were participating in the work at the end of the calendar year. The number in the various counties ranges from 1 to more than 100.

The livestock affected by the better-sires drive are cattle, horses, asses, swine, sheep, goats, and poultry. An incident of the report for the last three months in connection with poultry management comes from Noble County, Ohio. Apparently farmers in that section believe in producing infertile eggs, as recommended by the department. This means "swatting" the rooster after the breeding season is over. Twenty enrollments during the three months listed include 1,625 standard-bred hens and 515 grades, but no roosters.

In Colorado 71 persons are enrolled in the campaign, with 2,647 farm animals and 3,280 poultry listed. New Mexico has enrolled 40 farmers, with 9,482 farm animals and 1,275 poultry. Idaho, 17 farmers, with 1,059 farm animals and 461 poultry. Utah, 45 farms, with 4,023 farm animals and 2,114 poultry.

No Mortgages on Farms of the Johnstown Community.

(Continued from Page 5).

college first in Guernsey class. Whowell & Polley won first on breeders' herd and in Guernsey Purvis won first on herd.

The strongest classes in the show were the yearling heifers. In the Holstein class of ten the judge called attention to the college heifer winning first as the finest lined female in the show. There were nine Guernsey yearling heifers shown, all exceptionally good dairy type animals. An interesting thing in connection with this show was the fact that the young heifers were better than the cows shown. It was noticeable in individual exhibits and in the show as a whole. It is evidence of the progress which is being made in improving the type of dairy animals raised in this community.

Organize Tri-County Association.

In the evening a meeting was held for completing the organization o f the North Colorado Tri-County Holstein association, which has about twenty-five charter members. It was decided that the annual meeting should be held at Johnstown at the time of the Dairy Day show and that two other meetings should be held, one in Larimer county and one in Boulder county. A man with a registered bull and grade cows is eligible to membership, his annual fee being $1. The breeder with from one to ten registered females pays $2, the one with from ten to twenty, $3, the one with from twenty to thirty, $4, and so on. Honorary membership is $2 a year. C. W. Henry of Greeley was elected president, B. W. Fairbanks of Fort Collins vice president, and Walter Gurkink secretary-treasurer.

The evening banquet held in connection with the Dairy Day show was a most enjoyable affair and all the business interests of the town gave evidence of their desire to co-operate with the business men of the farms in working out their many problems. Among the speakers were Professor George E. Morton of the Colorado Agricultural college, Professor B. W. Fairbanks, P. V. Partridge of Willow Springs Dairy farm in Jefferson county, and A. C. Osterhous, the judge. Mr. Osterhous stated that the important things in dairy development were first, the man, then the cow, and finally the market for the product. J. W. Whowell, president of the Dairy Day association, and E. Engberg, secretary, predict that the show next year will be bigger and better even than this year. Already plans are under way looking toward providing a permanent building to use in place of the big tent.

Market Outlook for Farm and Ranch Products.

(Continued from Page 4.)

substantial support whenever hog values have a setback.

Hog Supply Lightest Since 1914.

Receipts of hogs at the eleven leading markets during January and February were 5,241,000 head, compared with 6,313,000 head in the same interval of 1921. The supply this year was lightest since 1914. Receipts at the leading markets have not expanded in spite of an advance in values above the $11 level at Chicago. Since light runs are the rule during late March, April and May, it is not believed that buyers will be given the advantage for more than the briefest periods until early in June, when receipts usually increase.

Weakness at eastern markets led to a sharp reduction in purchases by eastern shippers in the last week or ten days. This factor delayed the progress of the market for a short time, but the small loss has been fully recovered.

A Slump in Live Muttons.

The sheep and lamb market has had its first serious break in three months. Although receipts at Chicago were liberal, the total run at ten markets has actually decreased. Eastern shippers, however, were less active, although the eastern dressed lamb market declined only a small amount and the dressed mutton market actually advanced. The break was partly sentimental, however, so that the loss may be recovered. Colorado lambs have been moving freely and it is estimated that one-half of the total has been sold, leaving around 450,000 head still in feeders' hands. The number in cornbelt feed lots is believed to be light. Texas lambs and sheep will be much less numerous during April than they usually are, so that the visible supply until the southwestern lamb crop is ready to move is a comparatively light one.

Receipts of lambs and sheep at the twenty leading markets during January and February total 2,188,000 head, compared with 2,465,000 head in the same period a year ago, 2,297,000 head two years ago, and 2,179,000 head three years ago. The decrease in supply as shown by these figures has been entirely too small to account for all of the advance in values. The general change in the economic outlook has played a major part.

Light Horse Runs Suffice.

Eastern farm dealers are the principal buyers of horses at the present time and light receipts are sufficient to supply the demand. Farm trade has not reached the volume expected, although it has shown some expansion. City trade is disappointing, as outlets for big drafters are inadequate. The southern trade is unsatisfactory, as only low prices can be obtained. Farm demand should remain on about the present basis and possibly increase slightly during the next five or six weeks, but it is evident that the supply will be adequate to prevent much advance in values. Chunks weighing 1,400 to 1,500 pounds are quoted at $135 to $155 at Chicago, with 1,200 to 1,300 pound chunks bringing $90 to $130. Sales above $200 are rare.

Wheat Reserves Light.

Although the official report on farm holdings of wheat on March 1 is not yet available, two private reports have been issued which indicate a total of around 125,000,000 bushels. Holdings on March 1, 1921, were 217,000,000 bushels. If the official reports confirm the private estimates, the holdings will be the lightest since 1917, and considerably below the ten-year average. Total stocks of wheat on farms, at mills and country elevators and in terminal markets are estimated at around 250,000,000 bushels. About 30,000,000 bushels will be required for spring seeding, and about 160,000,000 bushels for domestic consumption, leaving around 60,000,000 bushels for export during the next four months and for carry-over on July 1.

The world's wheat situation is still regarded as very strong, with a prospective carry-over in all exporting countries including amounts on ocean passage, of only around 50,000,000 to 70,000,000 bushels. Since the Australian and Argentine surplusses are included in this estimate, the United States and Canada will be called upon to supply a large amount for export in the first six months after the harvest of the 1922 crop.

Wheat prices have shown an uncertain trend recently, owing to the arrival of rain in the southwest and a tendency on the part of European buyers to drop out of the market on extreme advances. They have reappeared, however, to purchase large quantities whenever values have had a good setback. Some domestic hard winter and durum wheat has been bought and large quantities of Manitobas have been taken. It is estimated that Canada has only 60,000,000 bushels yet to be shipped, of which less than 40,000,000 bushels are unsold. Japan is again a buyer on the Pacific Coast and a loan to Russia for the purchase of foodstuffs has strong support in Congress.

The movement of wheat from farms has decreased materially in the Southwest. Primary receipts are declining. Domestic milling demand for wheat is expected to increase very soon, so that more rapid decreases may soon be noted in the visible supply.

Corn Movement Subsides.

Although the movement of corn to primary markets is still fairly liberal, it has decreased nearly 50 per cent during the past week. Large quantities are held on track or in transit, so that total receipts may remain above the average for another week or two. Corn prices at one time recently reached a level slightly higher than at the same period of 1921, but declined slightly when the wheat market began to hesitate.

Unofficial estimates upon farm holdings of corn on March 1 are around 1,400,000,000 bushels—the largest on record with the exception of last year, when the total was 1,565,000,000 bushels Export demand for corn remains brisk and clearances still aggregate around 51,000,000 bushels per week.

In spite of a smaller supply available, the oats market has shown no independent strength, but has followed the

(Turn to Page 22.)

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Regulation Army O. D. Wool Shirts, at	$1.00
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IN THE NEXT ISSUE

Getting Into the Certified Seed Potato Game

Eleven million bushels of potatoes were harvested in Colorado in 1921 and nearly ten million bushels in 1920. This is one of our most important cash crops. Favorable soil and climatic conditions have largely been responsible for the success in growing potatoes. There is opportunity for much individual initiative in bringing about improvement.

In our April 1 issue we will feature improvement of the potato crop through use of certified seed, better rotation methods, disease prevention and better grading, to meet exacting market requirements. Colorado should produce its own certified seed. Here is an opportunity for men properly located who will painstakingly go into this game of certified seed production. All these points will be covered in our next issue.

Special Features in Current Number

Need More Brood Sows and Pigs on Our Farms.
Market Outlook for Farm and Ranch Products.
Pork and Peas on an Idaho Farm.
What Crops Will Win Under Dry-Land Conditions.
Dairymen Must Learn to Feed for Milk.
No Mortgages on Farms of the Johnstown Community.
Two Crops From Garden.
Why Plant Poor Seed?
From the Nation's Capital.
Eggs Pay the Grocery Bill.
How to Operate an Incubator.

If you find inspiration and useful information in this issue, why not pass it on to a neighbor who may not now be a subscriber. It is our constant desire to print material which will be helpful to our readers in working out their farm practices and improving living conditions in the farm homes. Do not fail to make use of our trained, practical contributors and editors if you are confronted with puzzling questions of farm practice. We would urge in particular that our dry-land farmers draw on the rich experience of E. R. Parsons, our dry farming expert.

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The Rural Household

Questions about home problems promptly answered by letter and through the magazine. Letters from women containing helpful suggestions for improvement of rural life are always welcome. Address all communications to Mary G. Collopy, Editor Home Department, Western Farm Life, Denver, Colo.

Home-Grown Wool.

Mary had some little lambs,
Fat enough for sale,
And clipped them, head to tail.
She took a pair of shears,
Then Mary said:
The price of wool is low,
The price of clothes is high;
Why can't our home-grown wool
Our winter clothes supply?
So she sent her cargo to the mill,
And ordered blankets, as a trade;
With a little money extra,
A satisfactory deal was made.

Mary's lambs were not the only ones that gave their wool for blankets. Several Larimer county lambs made the same exchange. Families with a few head of sheep had an opportunity to raise enough wool to supply a portion of their clothing needs. The following letter from D. C. Bascom, county agent, Larimer county, tells an interesting story:

"Half a dozen of the small wool growers of the county recently sent in small quantities of their wool to one of the following woolen companies: Fergus Falls Woolen Mill, Fergus Falls, Minn.; Valley Falls Woolen Mill, Valley Falls, Rhode Island; Chatham Manufacturing Company, Elkin, N. C., to have their wool made into blankets, clothing or suiting cloth. At the time this wool was sent, there was no market for the raw wool on the open market and these people were desirous of securing something from their wool and this seemed about the only market available. The results obtained, I think, have been very satisfactory. Wool blankets with 18 per cent cotton warp have been delivered to Fort Collins at seven dollars and twenty-three cents ($7.23) actual cost, allowing twenty cents per pound for the wool.

One company with which we dealt, required twelve pounds of raw wool and three dollars and seventy-five cents ($3.75) per blanket, for the cotton warp blankets, and eighteen pounds of wool and four dollars and fifty cents ($4.50) for the full wool blankets. Most people seemed to prefer the cotton warp which they believe makes a stronger blanket.

This method of disposing of small quantities of wool is quite popular at this time owing to the low price of raw wool and the high price of wool goods."

From another Colorado extension worker comes this story:

"I secured my wool from the College at 18 cents a pound. I sent six pounds of this to the mills to be made up into a wool bat. They made this up for me at the rate of two pounds of unwashed wool equaling one pound of washed and carded wool and charged 30 cents a pound for the washing and carding.

This came back to me in the form of a bat to be used in a comfort and I considered it a very good piece of workmanship and was very well satisfied with their work.

I later purchased 20 pounds of wool to be used in making up two pairs of double blankets. I sent these to a mill at Elkin, N. C. They charged me at the rate of $5 a blanket to cover the expenses of making them up.

In addition they had to purchase two pounds of wool at the rate of 20 cents a pound to supplement some that I had sent. When the blankets came back to me they were of the highest quality and were the best blankets I believe I have ever seen. Thy were made entirely of wool on a cotton warp, which makes them a very warm strong blanket. The color is white with a faint blue border, making them very attractive and suitable for home use. The blankets cost, roughly, $8 per pair, including postage each way.

I can recommend both of the articles that I have had manufactured to be of the best quality and I was very much satisfied with the work. I think it would be a fine plan for other people to follow with their wool."

Elbert county, Colo., has had similar experiences.

My Neighbor's Story.

"We had no telephone. We received mail only once a week—just a weekly paper and an occasional letter. During the winter months our trips to town were few. The railroad was 65 miles away. Our house stood far back from the road, so we rarely ever saw the few who passed our place. The school teacher took little interest in arousing community life. Our only attempt at gatherings was the Sunday-school service at the one-room school house. My interest in this old world was growing very dull. I was getting into a rut and I despised myself for allowing it. I determined to create some new interest. And the next day you came."

Mrs. Seaman was entertaining the county superintendent of schools, Mrs. Jackson.

"But I didn't stay long enough to offer you any help in community problems," Mrs. Jackson answered.

"No, but you left me two magazines. That gave me a nidea. We needed more good reading material and I decided to get it. I wrote to the county agricultural agent and asked him to save the good agricultural magazines for us. The next time our county agent came he brought a large bundle which had been collected by the home demonstration agent and yourself. Remember you told me how that book store owner gave you his unsold copies at the end of the month? I guess plenty of folks in the city were glad to give you their used magazines. Anyhow, we had a treat."

On Saturday, John made me a simple magazine rack. We took it to Sunday-school the next day and arranged our newly acquired magazines so that our neighbors might be tempted. You know the result, Mrs. Jackson. It was the beginning of Green Hill circulating library. Everyone brings magazines to Sunday service now and we exchange. Our interest in our neighbors has widened, and I hardly need to tell you that everyone now looks forward to those hours together on Sunday."

When Clothes Freeze.

"On very cold days we all find difficulty in hanging out clothes that freeze stiff as we take them from the basket. If we stop to warm our hands the clothes become too stiff to handle. I do not like to wear gloves; few women do, on washday. But I have a small bowl of cornstarch on the table. I dip my hands in this starch and rub it well into the skin. This leaves my hands very comfortable and I hang out my clothes without stopping to blow my fingers."—Mrs. J. W. C., Nebraska.

To Help Flowers Grow.

The finest thing I have ever tried for flowers is a liquid fertilizer made of rabbit manure. One or two applications a week will bring wonderful results. It is especially fine for cactus, so if you have some pet species that you want to coax into bloom, try this. The lobster claw will throw forth blossoms at every joint and in midwinter it will be covered with beautiful blossoms that last a good while. Carnations and geraniums also thrive wonderfully with this stimulant. Rabbits are very plentiful everywhere now, so a supply of this manure is within reach of all, and once tried it will always be used.

An Antiseptic for Colds.

Every family needs a good alkaline antiseptic. At this season when colds are prevalent, it should be bottled and kept in a place convenient for quick use. A common hospital formula is made in the proportion of one pint of water, two teaspoons of salt, three teaspoons of baking soda and four teaspoons of boric acid. The latter may be bought at the druggists' for 10 cents. For a gargle dilute yith a little cold water; for a gravity nasal douche dilute with a little hot water; for a tooth wash use to taste.

Our Fashion Service.

All patterns 12 cents each. Address Western Farm Life, Pattern Department, 1518 Court Place, Denver, Colo.

Read This Before Ordering: Patterns ordered through this magazine are mailed promptly from the factory at Brooklyn, N. Y., and arrive in 10 to 12 days from time order reaches Western Farm Life. Be sure to specify size and number of patterns. Write your name and postoffice address plainly to avoid delay. These patterns are handled at cost, as a service to our women readers. The price of 12 cents includes postage.

3410—A New and Attractive Style for the Young Miss.—Pattern 3410 is shown in this illustration. It is cut in three sizes: 12, 14 and 16 years. A 14-year size will require 4 yards of 44-inch material. Embroidered serge, printed crepe, beaded georgette, tricotine, satin and velveteen are attractive for this style.

3000—A New and Distinctive Style.—A good looking coat or "wrap" dress, is

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With Christian Herald	1 yr.,	2.20
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With Review of Reviews	1 yr.,	3.45
With Pathfinder	1 yr.,	1.55
With Current Opinion	1 yr.,	3.95
With Popular Science Monthly	1 yr.,	3.20
With Delineator	1 yr.,	2.55
With Modern Priscilla	1 yr.,	2.20
With Everybody's Magazine	1 yr.,	3.20
With Literary Digest	1 yr.,	4.85
With Etude, Music Magazine	1 yr.,	2.45
With Illustrated World	1 yr.,	3.45
With American Magazine	1 yr.,	2.80
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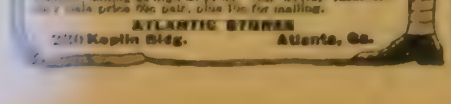

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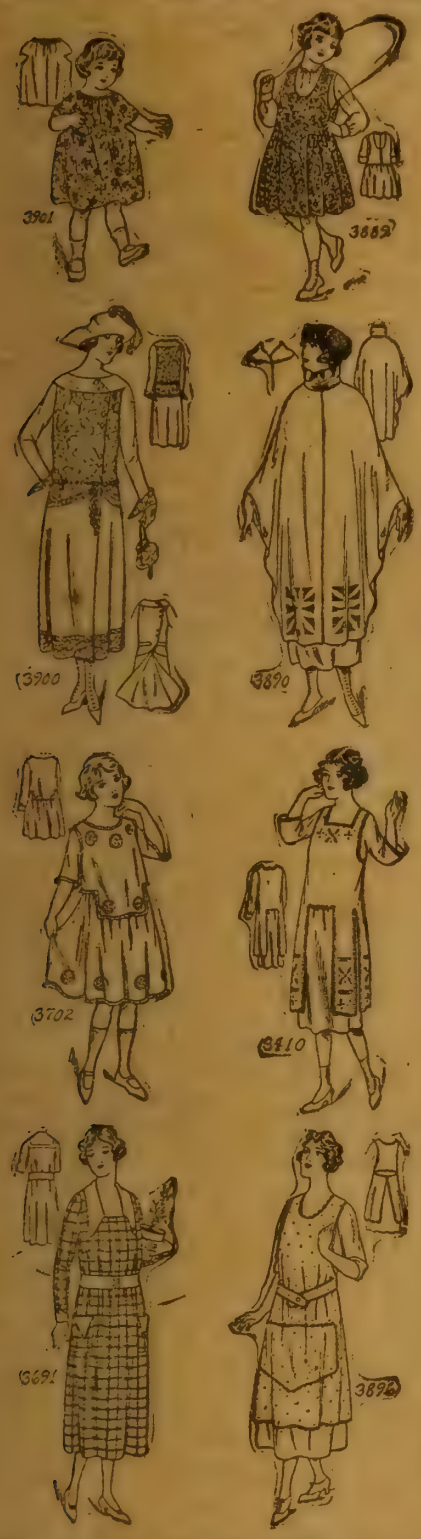
The rat is the worst animal pest in the world.

a valuable acquisition to the busy woman's wardrobe. It is easy and more comfortable to adjust than a slip-on model, and as here portrayed desirable for street or indoor wear. The boat collar and smart cuff are new features. Figured taffeta and crepe are comined in this instance. The pattern is cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. A 38-inch size requires 3½ yards of 54-inch material. The width at the foot is 2¼ yards.

3889—A Popular Model.—The jumper style offers many possibilities in design, finish and material. As here shown, the waist is lengthened in panel effect, over the front, and is joined to gathered skirt sections over sides and back. The dress



may e of serge or jersey cloth, and the guimpe of crepe, lawn, voile or batiste. The pattern is cut in four sizes: 4, 6, 8 and 10 years. The guimpe will require 1½ yard of 27-inch material, and the dress 2⅜ yards for a 6-year size.

3702—A Pretty Frock for the Growing Girl.—Pattern 3702 was used to make this style. It is cut in four sizes: 8, 10, 12 and 14 years. A 10-year size will require 3¼ yards of 40-inch material. Organdy, Swiss, voile, dimity, batiste, silk, crepe, crepe de chine, and gingham, chamgbrey, gabardine and serge could be used for this style.

3901—A Pretty Frock for a Tiny Tot.—Here is just the neatest and simplest play frock, attractive in chintz, cretonne, voile or pongee. It slips over the head, or may be fastened at the center back with buttons or snap fasteners. The pattern is cut in four sizes: 2, 3, 4 and 5 years. To make this style in a 2-year size will require 1⅝ yard of 32-inch material.

3896—A Simple Serviceable Apron.—This apron has a very practical pocket. It is a one-piece model, with the back shaped to form belt extensions that hold the fullness of the front in place. Dotted percale is here shown, with rick rack braid for trimming. The pattern is cut in four sizes: Small, medium, large and extra large. A medium size will require 2⅝ yards of 36-inch material.

3691—A Comfortable Word Dress.—Pattern 3691 is here illustrated. It is cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size will require 4⅞ yards of 36-inch material. Gingham, percale, seersucker, lawn, sateen, linen, calico and flannelette are good for this model. The width at the foot is about 2 yards. The sleeve may be in wrist or elbow length. If made of contrasting material, collar, belt, cuff and pocket facings require ¾ yard.

3889—A Stylish Wrap.—Simple and attractive and suitable for silk, velvet cloth or fur fabrics. The pattern for this design is cut in four sizes: Small, 34—36; medium, 38—40; large, 42—44; extra large, 46—48 inches bust measure. A medium size will require 4¾ yards of 44-inch material. The collar may be worn high or rolled as shown in the small view.

Some Hatching Dont's.

1. Don't leave the door of the incubator open while turning the eggs.
2. Don't fill the lamp before turning the eggs.
3. Don't handle eggs with kerosene on your hands.
4. Don't leave the incubator without making sure the lamp flame is not too high or smoking.
5. Don't lay things on top of incubator, as they may interfere with regulating device.
6. Don't change regulating device after it has once been adjusted, unless toward the end of the hatch, when the temperature has a tendency to climb.
7. Don't forget to fill and clean lamp daily.

Gobler Has Short Beard.

A subscriber asks if it is true that a turkey gobler with a short beard is worthless for breeding. She has one which had a full size beard last year but is very short this year. This is a new one to the poultry editor. If the gobler is healthy and vigorous in appearonce we should have no hesitancy in using him, in defiance of what is probably only superstition.

Sex Detector Proves Useless.

Tests by the bureau of chemistry of the United States Department of Agriculture show that apparatus now being widely advertised for detecting the sex of eggs, insects, etc., are valueless. Many tests of several of these sex detectors were made at the suggestion of the post office department.

Pork and Peas on an Idaho Dry-Land Farm.

(Continued from Page 4).

as much up against market breaks as I've ever been with pork. One year I sold 200,000 pounds of seed peas for 6½ cents a pound—$13,000. Next year they broke to 1½ cents a pound. So I figured to sidestep this way. I buy no stocker hogs until the crop is about made. Then I know pretty close to what the market price of the peas will be, and according to that price, I put a big lot, or all, on the market for seed, or I bring in enough hogs to feed it all.

Hogging Crop Saves Expense.

"And, what's more, after this I'll start feeding earlier and hog off most all of the crop. If I have to cut some and stack it on account of the weather, I'll do no threshing but feed it all from the stack. I'll cut out what expense there is in that. And if a dry year comes when we can't make any crop, I've got no stock hanging on, thin and poor, and forced into sale at big loss.

"But we have mighty few such dry years here. There's been only two in the past ten years, and if a dry farmer doesn't figure ahead for such years, he'd better quit."

I spent a day with him, going over his ranch. The buildings were unusually good, the principle one being a huge hog barn for hardening off market hogs in the winter. There was not a hog on the place as it was early June, but his wheat and the peas in the "fallow" land were in the most promising condition. Armbruster estimated that if allowed to mature, most of his pea crop would thresh out 1,600 to 1,800 pounds to the acre. That, at the present price —1½ cents—would be a gross return of $40 to $45 an acre, much of which would be absorbed by the cost of threshing, cleaning, sacking and shipping out.

So the hogs will get it all.

The experience of Armbruster should interest the wheat growers on irrigated land fully as much as those on dry land. Over in the great Twin Falls and American Falls districts, where hundreds of thousands of acres of irrigated land are always in wheat, some growers have adopted a rotation of peas, the crops of which are always very liberal and very good. But wicked breaks in the market have discouraged many from planting that crop, and they keep in wheat or other small grains every year. A study of the Armbruster method of planting peas every third year and putting some stability in the returns by hogging off would cover three big points: 1. Relieving the land of the "all-wheat" curse; 2. Certainty of a fair return, at least, from that land, instead of nothing from a summer fallow. 3. The gain of very valuable fertilization for the succeeding wheat crop.

Free Booklet
A Beautiful Jell-O Book will be Sent Free to any address upon request.

DESSERT is the climax of a meal and should be chosen with such care that one rises from the table with the delightful feeling of having dined perfectly.

When the appetite has been satisfied with the meat and vegetable courses, bring on a dainty dish of fruit Jell-O with cream to add a last fillip, and to bring luncheon or dinner to its ideal conclusion.

JELL-O

America's Most Famous Dessert

The American Offices of The Genesee Pure Food Company are at Le Roy, N. Y. The Canadian Offices are at Bridgeburg, Ont.

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Means more to us than a mere matter of dollars and cents. It is practical encouragement—that kind of encouragement which spurs us to try and make Western Farm Life a bigger and better magazine. If you like Western Farm Life, send us your renewal promptly and try and get your friends and neighbors to subscribe at the same time.

WESTERN FARM LIFE, DENVER, COLO.

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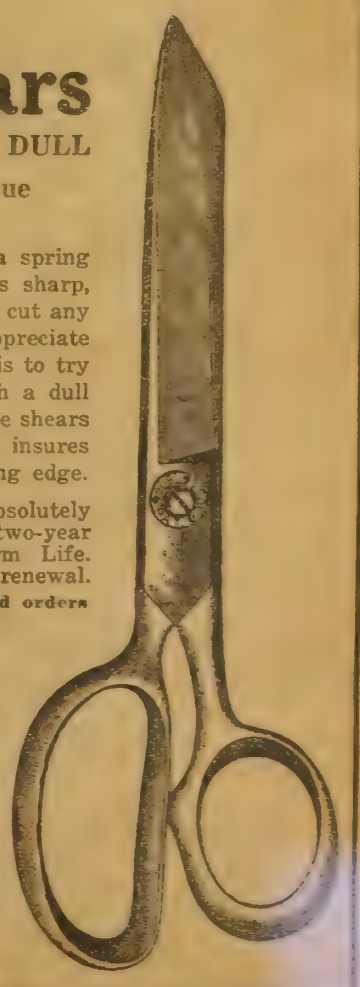
THE KIND THAT DON'T GET DULL

Will cut anything from wet tissue to the heaviest cloth.

This high-grade shear is equipped with a spring tension attachment that keeps them always sharp, and also makes it possible to adjust them to cut any kind of material. Every housewife will appreciate this feature as she knows how annoying it is to try to cut out different kinds of materials with a dull pair of shears that cannot be adjusted. These shears are made of the best carbon steel, which insures strength, and an "always sharp" keen cutting edge.



Free a pair of these shears given absolutely FREE, postage paid, with a two-year subscription to Western Farm Life. Subscription may be new or renewal.

We have only a few of these Shears left, and orders will be filled as received.

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Western Farm Life, Denver, Colo.:

Gentlemen—Enclosed herewith find $1.00 for which please renew my / send me } WESTERN FARM LIFE for two years, and send me, postage paid, the 8inch Tension Shears.

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ANCONAS for Profit

The fellow who wears the BROADEST SMILE and the BIGGEST BANK ROLL now-adays is the ANCONA MAN. Never before has there been so many folks taking up POULTRY as a BUSINESS PROPOSITION, and the CENTER of INTEREST is the S. C. ANCONA—the greatest business hen ever known.

Don't take our word for it, we invite you to do as many others are doing, TRY THEM OUT with any other breed on earth. No matter what fowl you are now breeding, TRY S. C. ANCONAS BESIDES THEM and be convinced just as we were a few years ago that S. C. ANCONA is the BIGGEST LITTLE MONEY MAKER of the age.

THE PUBLIC WANTS THEM—Are you in a position to supply the demand in your territory? If not, write us. We will mail you our free catalogue, giving you valuable information concerning the breed, our methods, and our strain of trap-nested and pedigreed Anconas—the

Leading Exhibition Strain of the West

JUST WON AT THE NATIONAL WESTERN—First cock, first hen, first, second and third cockerels, and first and second pullets. No pens entered.

Our strain is bred for EGGS by the only reliable method—the TRAP NEST.

BABY CHICKS AND HATCHING EGGS in any quantity, at PRE-WAR PRICES. We can sell you QUALITY chicks, as low as most hatcheries sell chicks from bought-up market eggs of unknown quality. Book orders at once, and avoid being disappointed.

Great Western Poultry Farm

Box F. Rocky Ford, Colo.

PLACE Your Order Now for EGGS OR BABY CHICKS

From Our Bred-to-Lay

S. C. W. LEGHORNS

The FOWLER EGG FARM STRAIN OF LEGHORNS has been bred for eggs, Hoganized and type-tested for so many years that they will give you a LARGER FLOCK AVERAGE of big white eggs and make you more real money than any other strain of Leghorns in the west. Our customers say so when sending back year after year for more eggs and chicks from The Fowler Egg Farm. A customer at Avondale, Colo., writes: "Can I get 500 chicks in March? I bought 500 from you last year; raised 238 pullets and 221 cockerels. I had 2,000 chicks in all from four other poultry farms. Your chicks were by far the best and healthiest that I received. I cannot say too much for the QUALITY of your stock; they are just as fine as can be had." These kind of letters and repeat orders are what count. There is a reason.

After many years af careful breeding and selecting for increased egg production we have developed a strain of extra large Leghorns that lay big white eggs. Our pullets mature quick, many laying at 4 months and 18 days and weighing 4 to 5 pounds in less than 9 months. The long deep bodied kind with large looped and folding combs. You cannot get better laying stock at twice our prices, no matter where you go. Write for Catalog, prices and facts from customers before you buy eggs or chicks. Its free and tells all. Write

FOWLER EGG FARM, Route 1-B, Fowler, Colo.

TOWNSEND FARM

Formerly Mountain View Poultry Farm

HATCHING EGGS

From our superior flock of S. C. R. I. Reds, White Plymouth Rocks and S. C. Buff Orpingtons. Order early to assure yourself of prompt delivery. Prices furnished upon application.

STOCK FOR SALE.

PHONE LAKEWOOD 75. EDGEWATER, COLO.

Directly west and adjoining Lakewood Country Club.

Blakeland Farms' Quality Leghorns

SPECIAL SALE—To make room for Baby Chicks: For $25 we will ship 12 fine exhibition S. C. White Leghorn Hoganized Pullets mated with fine male. Order before they are gone.

24 BLAKELAND BUSINESS LEGHORNS LAID 4,804 EGGS IN 365 DAYS.

These eggs sold for $191.92, or $8.33 average per bird. Our best record pullet last year laid 292 eggs. The foundation for such a business can not be bought for a song. Our prices are reasonable. BLAKELAND STANDS FOR QUALITY FIRST, LAST AND ALWAYS. Write for Catalog B.

Blakeland Farms, ON COLORADO SPRINGS ROAD **Littleton, Colo.**

BABY CHICKS AND HATCHING EGGS

From Merk's Famous Strain of S. C. White Leghorns, that have the laying [illegible] bred into them through years of patient selecting and careful mating, and have the ability to reproduce it. Send for circular and price list. We guarantee to please you and our prices will surprise you.

Merk's Poultry Farm, Rocky Ford, Colo. Box W

LOWER'S POULTRY FARM

ARVADA, COLORADO.

Has developed a strain of all-year laying Single Comb Rhode Island Reds that will fill your needs and put you in the way of making money with poultry. Descriptive Booklet on Request.

STOCK, EGGS FOR HATCHING, BABY CHICKS.

Reduced Prices on Hatching Eggs and Baby Chicks

FROM SUNRISE S. C. WHITE LEGHORNS, THE KIND THAT LAYS THE WINTER EGGS.

All [illegible] accepted contracts at the original price list, please note the 25% reduction; Chicks 25, 50, 100, 500, 1000, 100% live delivery guaranteed. Eggs, 15, 30, 50, 100, 500, 1000, 90% fertility guaranteed. [illegible] get our circular for further information regarding our stock, etc. Please book [illegible] F. W. Tambridge & Son.

SUNRISE POULTRY FARM, ROCKY FORD, COLO. R. R. 3.

Profitable Farm Poultry

W. E. VAPLON.

Questions about the farm flock promptly answered by letter. Free advice on all phases of poultry production. Address all inquiries to Poultry Department, Western Farm Life, Denver, Colorado.

Chickens of different ages should not be put together in small runs or coops. This frequently is done to operate brooders to full capacity. It is a poor practice to combine chicks of different hatches, even though they may not differ more than a week or ten days in age. The younger chicks in such a combination never make as rapid or uniform growth as they would in a brooder by themselves.

It always is desirable to have as many chicks hatched at a time as can be cared for properly. With a large bunch of the same age there will be only one standard or basis for comparison throughout the season. Undersized chickens will immediately be classed as runts or weaklings and will not be carried along, on the assumption that they belong to a younger brood. There will always be a few of these runty, inferior chickens, and they seldom amount to anything. It also is a decided advantage in selecting the pullets in the fall to have them all of the same age. With pullets of different ages the problems of housing and developing them are more complicated.

If you find rotte neggs among those you are hatching, do not assume that these eggs which you bought for hatching were infertile. Many persons are unreasonable and have wrong impressions about hatching eggs. The fact that the eggs spoil is evidence that they were fertile. Every rotten egg at the end of a three weeks' incubation period indicates a fertile egg. The infertile egg at the end of the hatching period indicates but little signs of being stale, and is only aged by the hatching process. It would not be very good to eat but as good as an egg kept as long in the ordinary heat of a kitchen. It is the common practice of poultry raisers to test out the infertile eggs and boil them for feeding to little chickens.

Feeding Alfalfa Leaves.

All poultry men know that bran is a good chicken feed and it is used in nearly all the mashes fed. It is also good fed dry. Some poultrymen keep bran before their chickens at all times and they eat large quantities of it. On most farms there is a good substitute for bran in the alfalfa leaves. It has been shown by careful analysis that there is as much protein in alfalfa meal, pound for pound, as in wheat bran, and alfalfa meal is composed of the whole plant, stems and all. The alfalfa leaves, therefore, that are found in the haymows and in the mangers on alfalfa farms are more valuable still and should be fed to chickens in the dry state and also made into a mash by scalding with hot water and mixing with corn meal or other ground grain. A cheaper or more valuable feed cannot be given to the laying hen.

Hatch Chicks Early.

Early hatched pullets lay eggs in the fall and winter, while late hatched pullets and old hens lay around, producing nothing but fat. Eggs are always high-priced during the fall and winter. Millions of eggs and probably a million dollars can easily be added to Colorado's poultry income if the chickens are hatched earlier.

Early spring is Nature's most favorable growing season. Early hatched chickens have the advantage of this favorable growing season and a longer period for development. Given the same feed, care and attention, chicks hatched in March and April will weigh more when they are four months old than those hatched in May and June when they are four months old.

March, April and May are the best months for hatching in Colorado. Chicks hatched during these months, with proper care and attention, should start laying in October and November, when the old hens are molting, and eggs are high priced. They will continue laying through the winter.

Do not hatch chickens in the summer. Thousands of late-hatched chicks die each year as the result of being infested with lice which are so prevalent in the summer. Then, too, hot weather retards growth. The broilers from late hatches always bring low prices, while those from early hatches bring very high prices. Late hatched pullets do not lay as many eggs as early hatched pullets. The early pullets are the ones which set early the following spring, and make it easy to continue hatching early.—Paul C. Jamieson.

Eggs Pay Grocery Bills.

Eggs sold from my laying flock of 150 to 175 hens bring in about $200 a year and we use uncounted dozens for the table and many are used for hatching. The sale of cull hens brings in $50 or $60 more. We do not sell all the young roosters to pile up poultry profit, using the money to buy back bacon and canned salmon. We eat them, 150 or more each year. It does not total up much money does it? But its lots better than having to sell four loads of wheat to pay last year's grocery bill. I have never made a fortune by raising chickens, but I can look the groceryman in the eye, for I have never asked him for credit. The eggs pay the way.

Most farm women do not have suitable equipment nor the wherewithal to purchase what poultry experts advise, but it is criminal to hatch out chickens with no coops ready to house them. I have a dozen coops built seven years ago at a cost of 35 cents each, which still give me excellent service. They are half pitch and one lid is hinged. They are ventilated through holes bored in the side with a half-inch bit pointed upward so as to exclude rain. They accommodate a hen and 15 to 20 chicks. As the coops are light they can be moved out of the wind, or to where some old mother hen is stranded in a rain storm.

I have several small yards made of lath in which to confine the mother hens and chicks for a few days, but as soon as the feathers start I let the old hen go. She will take them out under bushes, sage brush, or bunch grass, and keep them warm and dry if you'll give her a chance. Chickens are not house plants, so don't take them inside. If they "peep" and can't keep up they usually have head lice and need a drop of melted lard on each little head. I kill every weak chicken as soon as I notice it. A few chickens may be saved by doctoring, but in the fall you'll know them by the way their feathers point, and the next spring you'll have a flock of their progeny to nurse.

To make a profit on eggs you must sell when eggs are high, in December and January. Early hatched chickens make winter layers and winter layers make early sitters to raise more early layers to lay high-priced eggs. I start the circle by setting the first broody hens sometimes in January or February. Usually these chickens find better weather than those hatched later, and I raise practically every one of them.

Six years ago I gave up my incubator and since have hatched as high as 600 chicks with my old hens, and they were strong and vigorous. Since I quit the incubator I haven't had a case of bowel trouble or leg weakness among my chicks. I feed the little chickens a few bread crumbs or corn bread broken up fine.

Plenty of water to drink is the very foundation of egg production. I have an automatic waterer attached to the horse tank that insures a water supply in all but freezing weather, and a patent stoneware fountain for small chickens. Both soon were paid for in the chickens saved from drowning.

A balanced ration is fine, but we haven't the money this winter for the feeds we do not raise. Here is my flock's menu: Corn, served on the cob at the corn pile, water and skim milk to drink, grit, pickings at the fodder and cane stacks, wheat, grain at a time obtained by much scratching in the straw pile.

We did not feel able to build a scratching shed, but my husband banked the hen houses nearly to the eaves on the north side with straw and piled a load of it between them. I scatter the few table scraps I have in the straw and the hens gets lots of exercise scratching if they don't get much else.

Mites, lice and dirty henhouses soon get the profits. Louse powders kill lice and used cylinder oil on the roosts overcomes the mites.

Theoretically, purebred poultry is the only kind that pays, but a mixture of

R. I. Reds and Brown Leghorns suits me better. The Reds are good mothers and lay well in the winter, while the Leghorns will lay in the fall after the larger hens have begun to molt.—Mrs. Owen Critchfield, Yuma county, Colo.

Honorable Mention Poultry Letters.

In this issue we are printing one of the honorable mention poultry letters in our poultry letter contest, the writer being Mrs. Owen Critchfield, Yuma county, Colo. Other honorable mention letters are those of Jessie Deming, Elbert county, Colo.; and Josephine Joslyn, Wyoming.

How to Operate an Incubator.

Maintenance of proper temperature, sufficient moisture, right amount of ventilation and good eggs are the four important factors in successful incubator operation.

It usually is advisable to follow the directions of the manufacturer in regard to the proper temperature for any particular make of incubator. The temperature at which such a machine is run will depend principally upon where the thermometer is located in the egg chamber. With the bulb of the thermometer level with the top of the egg, a temperature of 102 degrees for the first week, 102 degrees for the second and 103 degrees for the third week should be maintained.

A temperature that runs too high causes a large number of blood rings and dead germs, or concludes the hatch too soon. Eggs subjected to a high temperature should be removed from the egg chamber and cooled until cool to the touch. Low temperature delays the hatch, which is seldom if ever a good one.

The amount of moisture to be supplied to the incubator depends upon the type of incubator and its method of ventilation. It is generally concluded, however, that some moisture is necessary. This is especially true for incubators operated in Colorado or any of the semi-arid states.

The best method of supplying moisture is to put it directly into the machine by means of sand trays or water pans which are kept filled with warm water. One hundred eggs weighing 200 ounces when put in the incubator should not lose more than twenty ounces or 10 per cent in weight in nineteen days if the best results are to be expected.

The chick developing in the shell requires a supply of oxygen or fresh air for its proper development. Incubators have various arrangements for regulating the amount of fresh air into the egg chamber. One should carefully follow the instructions of the manufacturer in this respect.

Although an incubator may run perfectly in every respect, it will not hatch eggs if they are not the hatchable kind. Improper management of a flock will lower the hatchability of the eggs produced. Improper feeding of either good or poor rations; lack of vitality in breeding stock; improper matings; lack of range, or too intensive poultry keeping; forced egg production from breeding stock during the winter, all tend to reduce the vitality of the eggs produced.

The following instructions are given by O. C. Ufford, instructor in poultry husbandry at the Colorado Agricultural college, for tsarting and regulating the incubator:

1. Fill the tank with hot water (if hot water type).

2. Trim the wick, cutting straight across the top and then snipping off each corner, to give an oval flame.

3. Fill lamp three-quarters full and light, turning the wick to give a low flame at first, as the size of the flame will increase as the lamp heats up. A high flame before flues warm up will cause smoking. If this takes place the flues must be cleaned before heating system will work.

4. Loosen the adjustments on the regulator so that all the heat will pass through the machine. Allow for expansion of thermostat upon heating.

5. When the temperature reaches 101 degrees F. adjust the regulator until the disk is raised one-eighth inch above the vent on the lamp.

6. Run the machine at least 48 hours to be sure that it is properly regulated and that the temperature will remain constant.

7. After the machine has once been adjusted and the temperature is constant, don't meddle with the regulating device.

8. Lamp should be filled once daily. Trim wick at time of filling by turning the wick down and rubbing the charred portion off even with top of wick guide with a match.

9. Keep lamp and burner clean. Do not turn flame up too high after placing lamp back on machine.

10. If the incubator is a hot-air type in which there is a maximum amount of ventilation, and particularly if it is to be operated in a dry room, a sand tray covering the entire bottom of machine may be necessary to supply sufficient moisture. In such case the sand should be thoroughly moistened when starting up the machine. If less moisture is required the same pan may be used without sand, as less water will evaporate from free water surface than from the moist sand. Only warm water should be used after eggs are placed in the incubator.

When the machine is running properly put in the eggs and do not disturb for two days. On the third day begin turning the eggs night and morning and continue until they begin to "pip," about the nineteenth day, then close up the machine and do not open again until hatch is over. This is important.

Sprinkle the floor underneath the machine night and morning. The eggs get sufficient cooling during the turning process. It is not necessary to cool them unless the machine has no openings for ventilation or the temperature goes too high.

Treatment of Roup and Canker.

What is a good treatment for canker in chickens. Why is canker supposed to be from the same cause as roup, when there are no symptoms of cold?—F. W. M., Larimer county, Colo.

In a way we might say that cold in chickens is to roup, what a cold in the human is to influenza. In other words, roup is a specific infectious disease of chickens, with catarrhal symptoms much like a cold. Avian diphtheria, chicken pox, canker or contagious epithelioma, roup, and contagious nasal catarrh, are one and the same disease, with different manifestations, the same as glanders and farcy in the horse are the same disease, but appear with different clinical symptoms.

There are really two forms of the disease. In one, there is first a catarrhal condition, like a cold, followed by croupous membranes in the air passages, swelling under the eyes, difficult breathing, loss of appetite, and death in most cases. In the other form, which is commonly spoken of as chicken pox, nodules appear on the comb and wattles. If the pox material from nodules, of chicken pox, is rubbed into the oral mucosa of a healthy chicken, the characteristic croupous membrane of diphtheria—(roup)—will develop, thus proving their relationship.

The clinical picture of the disease depends upon whether there is an affection of the skin or the mucous membranes, or if both these tissues are involved, and whether the disease runs an acute or chronic course. Except in case of very valuable birds, treatment is scarcely worth while. So long as the disease is confined to the skin, or even the upper air passages, proper treatment will save some of them. The nodules on the skin may be softened with ointments and the exposed surfaces painted once a day with silver nitrate solution, using about 1 per cent strength. Tincture of iodine might be used. For detailed treatment consult your veterinarian.

Where the disease is confined to the skin, it runs a favorable course in the majority of instances. The disease in any of its manifestations is due to a common cause—specific infection—and had best be handled like we would any infectious or contagious disease of other animals. Dead birds should be removed and the sick ones isolated or destroyed. Clean and disinfect the coops and runs. It is usually better to examine carefully each chicken and place the well ones by themselves in clean quarters. It is well to remember that the virus circulates in the blood of chickens for some time after they have recovered, even from the milder form of the disease, and there is danger of its spread in this way. The use of disinfectants in the drinking water will not of itself control the disease. Active measures must be taken along the lines indicated.—G. H.G.

From the Nation's Capital.

(Continued from Page 9.)

ures be released from repayment of the amount borrowed, and any borrower whose crop was a failure as herein defined, and who made payment on his loan prior to May 31, 1920, shall be reimbursed.

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Mondell Discusses Agricultural Problems.—Recently Congressman Frank W. Mondell of Wyoming appeared before the committee and made a plea for the pioneer farmers in the dry-land farming areas of the west. He pointed out that settlers in most every section of the west had been forced to embark on a system of farming not favorable to the highest success. They have been compelled for lack of capital to grow grain, when permanent success is largely dependent upon crop diversity, dairying and livestock. He said that some of the now richest farming sections in Kansas and Nebraska have gone through the same experiences as conditions now prevailing in Wyoming and surrounding states. The dry-land farmers, he argued, were experimenters, trying to solve the question as to whether the country now asking for aid should go back to range conditions, with great livestock ranches, or can be a country of small farm ranches. He believed that as a matter of national welfare, the government was justified in aiding these people. There isn't an acre of land west of the 100th meridian that any man was justified in saying could be farmed without irrigation thirty years ago. Now many thousands of acres of this land are being successfully farmed without irrigation and just as sure of crop production as any other part of the country. Representative Mondell opposed the various price-fixing bills now before Congress. He said he never had known a case of price fixing that did not disappoint everybody concerned. The price cannot be arbitrarily raised above or below the law of supply and demand without doing harm to the man that we are trying to benefit. Furthermore, he does not know of any authority in Congress to fix prices of grain or other commodity in time of peace. The Purnell bill, increasing appropriations for experiment stations, was opposed by Congressman Mondell on the ground of economy, the greater need of the farmers at this time being lower taxation rather than an enlargement of the activities of experiment stations. In this connection, Congressman Tincher said that already since the first of last April Congress has passed more legislation calling for larger appropriations to aid the farmers than any previous Congress.

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Non-Partisan League Grain Laws Held Invalid.—The grain laws enacted under the Non-Partisan League administration in North Dakota are invalid because in conflict with Federal laws, according to a decision by the Supreme Court of the United States. The decision was given in the case of the state of North Dakota against a grain company, appealed by the state to the United States Supreme Court from a decision of the Federal circuit court of appeals at St. Louis, Mo.

BABY CHICKS
Or Eggs for Hatching

LARGEST HATCHERY AND POULTRY FARM IN WESTERN COLORADO.
INCUBATOR CAPACITY 15,000 EGGS.

1,200 laying hens, thoroughbred S. C. W. Leghorns, Ferris strain, from trap-nested hens with records of 265 to 300 eggs per year. February 1st have already booked orders for 14,000 chicks for early delivery. Get your orders in if you want them filled on time. Prices: 18c each for March and April; 16c for May and June. F. O. B. Fruita. Eggs $1.50 per setting of 15, or $7.50 per hundred.

FAIRLAWN POULTRY FARM
FRUITA, COLORADO

Baby Chicks
NEW LOW PRICES SEASON 1922
MILLER BABY CHICKS ARE BRED FOR HEAVY EGG PRODUCTION
Customers report pullets lay all winter. 20 varieties to select from. 1,000,000 chicks via prepaid parcel post safe delivery guaranteed. Pleased customers in every state. 19th season Catalog FREE.
MILLER POULTRY FARMS
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SWEET CLOVER, $7 Hundred
Red Clover, $17; Alfalfa, $10; Alsike Clover, $16; timothy, $6; Sudan, $4; Orchard Grass, $25; Red Top, $25; Kentucky Blue Grass, $30; Grimm Alfalfa, $35. Liberty bonds taken at par. Satisfaction or money back. Order now, as prices are certain to advance.
Reliable Seed Co., Salina, Kan.

Come In and Get a Copy of this Big FREE Poultry Book
We want every poultry raiser in this vicinity to have a copy of DARLING'S new poultry book. Written by a former Government expert, it tells all about the feeding methods of famous poultry men and how they use
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to increase their poultry profits. It tells how to make your hens lay all winter long. How to start the pullets laying early. How to produce fertile eggs for hatching. How to make your chicks grow bigger and faster. Come in and get your copy of this valuable book today — it's free.
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Shipman's S. C. Reds
Were winners of 2d and 4th cockerels at Denver show, Dec., 1921, also winning 6th and 8th cockerels at Nat. West. Poultry Show, Denver, Jan. 1922. Setting eggs, $5 and $3. Also Ancona setting eggs, from 1st pen cockerel at Denver Show, Dec. 1921, $2 and $3 setting. Baby Chicks.
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BABY CHICKS
Fifteenth Annual Season. Book your order with us. All leading varieties from best selected Hoganized flocks. The kind that's bred to lay. With years of experience at the business and the proper equipment to meet your requirements we can give you best service.
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Write for price list. Alcott Sta., Denver

Single Comb White Leghorns
200 heavy winter laying pullets lay 9,887 winter eggs in Nov., Dec., Jan. Eggs sold to the market for $411.70, [illegible] $71.65 worth of feed. Fertile, Day-Old Chicks. Prices on request. Prompt, Safe Delivery. Hatching Eggs. Guaranteed.
THE ORDWAY POULTRY FARM,
J. Schleining. ORDWAY, COLO.

Free—Conkey's Poultry Book
80 pages chock full of information about the feeding and rearing of chicks, culling of hens, etc. Tells how to make chickens healthy and how to make them pay. Whether beginner or a professional, Conkey's book is worth dollars to you. Sent for 6 cents in stamps to pay postage.
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POULTRY

PLYMOUTH ROCKS.

PURE BARRED ROCKS, $2.50; EGGS, $1 SETting; $5, 100. Ida Ham, Burden, Kan.

PURE BARRED ROCK COCKERELS—$2 AND $3; none better. A. J. Joslyn, Gillette, Wyo.

PARTRIDGE ROCK COCKERELS FROM MADison Square Garden winners. Cora De France, Berthoud, Colo.

PARKS FAMOUS 200-EGG STRAIN BARRED cockerels, $3.50, $5, $7. Ed Arnold, Valentine, Neb.

BARRED ROCK COCKERELS—THOMPSON'S imperial "Ringlet" strain, $5. Mrs. J. A. Graham, Ransom, Kan.

RINGLET BARRED ROCKS, LARGE, VIGOROUS, beautifully marked, cockerels $2 and $3; pullets. Mrs. Gill, Piedmont, Kan.

FOR SALE—WHITE PLYMOUTH ROCKS; cockerels and setting eggs; prices reasonable. F. L. Toliver Stock Farm, Fort Collins, Colo.

BARRED PLYMOUTH ROCKS, BRED FROM trap-nested heavy laying stock; winners in public contest. John Tobias, Wheatridge, Colo.

BARRED ROCKS, RINGLETS; 84 PREMIUMS, 34 firsts. Cockerels, $3, $5, $7.50. Eggs, 15, $3; 30, $5. Mattie A. Gillespie, Clay Center, Kan.

HAVE FEW CHOICE WHITE COCKERELS LEFT, $2 to $4 each. Eggs $1.50 per setting of fifteen. Quality Fruit & Poultry Farm, Manzanola, Colo.

PURE THOMPSON'S IMPERIAL RINGLET DARK cockerels; grand breeders, show birds. Eggs $3, $5 setting. Mrs. Robert Simmons, Severy, Kans.

RINGLET STRAIN BARRED ROCKS, 25 YEARS exclusively, cockerels with egg capacity, also several choice cock birds. Geo. Drinnin, Columbus, Neb.

WHITE ROCKS, LINE BRED, HOGAN TESTED, winners at Kansas State Show. Choice cockerels, $5; satisfaction guaranteed. Albert Heit, Parsons, Kan.

"RINGLET" BARRED ROCKS—A FEW OF those dark, narrow barred, husky cockerels left, $3.75 to close out. Order from this ad. Arthur Waechter, Yuma, Colo.

BARRED ROCK COCKERELS, CHICKS. RINGlet exhibition and trapnest strain. Record to 290, over 100 premiums. Eggs, 15, $2; 100, $8. A. G. Hammond, Vinland, Kan.

SLEDGE'S PARTRIDGE ROCKS, BLUE RIBBON winners at Stock Show seven years; choice pullets and cockerels, reasonable. Guaranteed fertile hatching eggs. J. Sledge, 3818 Quitman, Denver.

HICKS' BARRED AND WHITE ROCKS WON 50 premiums at Oklahoma and Kansas State shows in December and January in classes of 300. Eggs $3 and $5. Write for mating list. H. F. Hicks, Cambridge, Kan.

STRANDBERG'S BARRED ROCKS LEAD AT the Nebraska State show, Lincoln, 1922, winning four firsts. Entered 45 birds, 37 under ribbons; largest display; several specials. Fine dark and light cockerels from the finest matings in the west, at reasonable prices. Perry Strandberg, Davey, Neb. Phone Rural 2411.

RHODE ISLAND REDS.

PUREBRED ROSE COMB RED COCKERELS, $2, $3, $5 John Nicholas, Argonia, Kan.

RICKSECKER SINGLE COMB REDS, TOPPERS; cockerels, $6. Eggs, $1.50 per 15; $3.50 per 50. A. L. Wylie, Clay Center, Kan.

THOROUGHBRED REDS — COCKERELS, $5; prize winners, heavy laying strain. Maud Waldrop, 717 W. Topeka, Trinidad, Colo.

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PARTRIDGE WYANDOTTE COCKERELS, $3. Mrs. J. Hungerford, Columbus, Mont.

WOOD'S SILVER WYANDOTTES, COCKERELS and eggs. Satisfaction guaranteed. Earl Wood, Gill, Colo.

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WHITE WYANDOTTES—COCKERELS FROM heavy-laying, prize-winning strain; large size. Miss Anna Lansdown, Ft. Lupton, Colo.

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SUPERIOR LAYERS; CIRCULAR FREE. GOLDen Rule Ancona Farm; Carrollton, Mo.

EXTRA GOOD SINGLE COMB ANCONA COCKerels, $2 each. Eggs, 15 for $2, or $6.50 per 100. Barred Rock eggs the same. Julia Ditto, Newton, Kan. Route 7.

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PURE BUFF LEGHORN COCKERELS, $1.25; trio, $3. Jennie Snelling, Eckley, Colo.

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WILSON'S BUFF LEGHORNS, 297 EGG-BRED winners. Write for mating list. Herb Wilson, Holton, Kan.

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SINGLE COMB BLACK MINORCA COCKERELS, $2.50 each. H. C. Maranville, Benkelman, Neb.

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FOUR PARTRIDGE COCHIN COCKERELS, $3 each. Mrs. Fred Prince, Potter, Neb.

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100 W. L. AND B. R. LAYING PULLETS; R. I. R. cockerels. 1036 S. Galapago, Denver, Colo.

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SEND FOR FREE CATALOG, SOUTHWESTERN Nebraska Poultry Breeders. All breeds, eggs, chicks, stock. Emma Whisenand, Alma, Neb.

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IF IT WEARS FEATHERS WE HAVE IT OR will get it for you. Spangled Hamburgs. March hatch Barred Rock and White Wyandotte pullets. Extra choice 1st cockerels priced right. Champney's Poultry Yards, 2057 S. Broadway, Denver.

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CHICKS—FROM BIGBONED ROSE COMB RED, Hogan tested, heavy layers, 16c prepaid. Mrs. Alex Leitch, Parkerville, Kan.

WINTER LAYING LEGHORN CHICKS—PEN A, 200 eggs up, 25c each; general flock, 185-egg average, 16c each. Hoganized 7 years. D. C. Deringer, LaJunta, Colo.

THOMPSON STRAIN RINGLET ROCK BABY chicks, 12c; also good blood Single Comb Brown Leghorns, 10c. Hatching season till June 1. Mrs. Reube Wilson, Melven, Kan.

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SINGLE COMB WHITE LEGHORN CHICKS— From choice Hoganized flocks; heaviest winter layers; live delivery, postpaid, 14c. Wylie's Hatchery, Clay Center, Kan.

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QUALITY CHICKS—WHITE AND BROWN LEGhorns, 14c; Reds and Barred Rocks, 12c; White Rocks and Anconas, 13c; Buff Orpingtons, 14c. Fleda Jenkins, Jewell, Kan.

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S. C. WHITE LEGHORN BABY CHICKS, 16c, postpaid and safe arrival guaranteed from my own stock, strong, healthy, and good layers. Terms, 25% with order, balance before shipping. Order early to get chicks on date when wanted. Ivar Johnson, Fremont, Neb.

COLUMBIA HATCHERY, P. O. BOX 1102, DENver, Colo. We can supply you with any quantity of baby chicks. Capacity 10,000 weekly; 17 varieties; live delivery guaranteed; parcel post prepaid. Write for prices and full particulars.

PUREBRED BABY CHICKS—PRICES ARE down: Barred White and Buff Rocks, S. C. and R. C. Reds, White Wyandottes, Buff Orpingtons, S. C. Black Minorcas, $16 per 100; S. C. White Leghorns and Anconas, $15 per 100; prepaid parcel post. Kansas Poultry Co., Norton, Kans.

PUREBRED BABY CHICKS LEADING VARIEties; popular strains. Exhibition and bred to lay qualities combined; special 20 per cent cash discount extended to March 1 only. Hatch every week; circular free. Anderson's Farm Hatchery, Juniata, Neb.

BUFF LEGHORN BABY CHICKS—MY TWELVE years' experience with the Buffs has fully demonstrated to my entire satisfaction that they are just what I call them—Best Layers on Earth. Get in on a good thing and try them. You will never regret it. Champney's Poultry Yards, 2057 So. Broadway, Denver.

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BUFF ROCK HATCHING EGGS. EMERY SMALL, Wilson, Kan.

PURE BLACK LANGSHAN EGGS, PREPAID. Mary McCaul, Elk City, Kan.

BUFF ORPINGTON EGGS, 105, $6; CHICKS, 15c. L. J. Clanin, Jewell, Kan.

R. C. REDS—EGGS, 105, $5; CHICKS, 14c— Linnie Clanin, Jewell, Kan.

BUFF LEGHORN EGGS, $1 SETTING; $5, 100. B. S. Brown, Lingle, Wyo.

"RINGLET" BARRED ROCK EGGS, 100, $6. Mrs. Lynn Bailey, Lyndon, Kan.

PUREBRED WHITE LANGSHAN EGGS, $6— Mrs. Allan Smith, Sterling, Kan.

BARRED ROCK EGGS FOR HATCHING, $4.50 hundred. Roy Black, Pauline, Neb.

CHOICE ROSE COMB BROWN LEGHORN EGGS, 5c each. Mrs. Ed Kelley, Dunlap, Kan.

PUREBRED ROSE BROWN LEGHORN EGGS, $8; chicks, $15. James Sedlock, Ord, Neb.

DARK CORNISH — STOCK, EGGS. WRITE wants. Madge Hawk, Carpenter, Wyo.

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ROSE COMB REDS, BRED LAYERS; EGGS, 15, $1.25; 30, $2. Ada Hopper, Branson, Colo.

S. C. WHITE LEGHORN CHICKS, 12c; EGGS, $4.50 per 100. Clanin Hatchery, Jewell, Kan.

EGGS—BIG BONED FISHEL WHITE ROCKS, $6 per 100. J. F. Darling, Central City, Neb.

WHITE WYANDOTTE HATCHING EGGS, $1 setting, $5 100, prepaid. Shedd's, Aurora, Colo.

EGGS—PUREBRED LIGHT BRAHMA, 15, $1.50; 50, $4; 100, $7. Mrs. Grace Buskirk, Pender, Neb.

BARRED ROCK EGGS—WINNING, LAYING strain; mating list. Sylvan Miller, Humboldt, Kan.

DARK, BRILLIANT R. C. REDS, BRED LAYERS, chicks, $16; eggs, $6, 100. Charles Sigle, Lucas, Kan.

S. C. WHITE LEGHORNS—EGGS, 15, $1.50; 100, $6. Baby chicks, 100, $16. W. L. Stokesberry, LaJunta, Colo.

BUFF ROCKS—EGGS, $1.50, 15; $4, 50; $7, 100. Chicks, $18 per 100. Della Wood, Milan, Kan.

BARRED PLYMOUTH ROCK EGGS FOR HATCHing, $1 per setting of 15. Mrs. C. J. Davidson, Fort Lupton, Colo.

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SINGLE COMB BROWN LEGHORN EGGS, $1 15; $5, 100, postpaid. Hogan tested prize winners. C. F. Stouffer, Polk, Neb.

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EXCEPTIONAL QUALITY WHITE WYANDOTTE eggs, $1 per setting, $5 per 100. Folder free. Richard Matoush, Julesburg, Colo.

PUREBRED SINGLE COMB GOLDEN BUFF Orpingtons, bred to lay. Eggs, $5 per 100. Thos. Morgan, Central City, Neb.

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EGGS—PUREBRED GOLDEN LACED WYANdotte, 15, $1.50; 30, $2.75; 50, $4.50; 100, $7. Mrs. Nellie Evans, Oakdale, Neb.

SINGLE COMB DARK BROWN LEGHORN EGGS; tested flock; "Everlay" sires; $5.50, 100, postpaid. Mrs. Harvey Crabb, Bucklin, Kan.

PUREBRED BARRED ROCK EGGS FOR HATCHing, $1 for 15, $6 for 100. Also special pen eggs, baby chicks. R. D. Mutz, Fowler, Colo.

EXCELLENT LAYING STRAIN EGGS; LIGHT Brahmas, Barred Rocks, S. C. Reds. Summerfield & Skinner, 8817 W. 23rd, Denver, Colo.

LET US FILL YOUR ORDER FOR BABY chicks and eggs, 13c and up. R. C. Reds. Creech & Sons Hatchery, Central City, Neb.

WHITE LEGHORN BABY CHICKS AND HATCHing eggs; Hoganized stock, 250 egg strain. Mrs. H. L. Bloomfield, R. R. 3, LaJunta, Colo.

EGGS FOR HATCHING—ROSE COMB RHODE Island Reds, culled for better layers; $1 per 15; $5 per 100. W. D. Davies, Shawnee, Wyo.

BABY CHICKS, 20c; EGGS, 8c; S. C. WHITE Leghorn heavy laying strain; satisfaction guaranteed. Mrs. B. E. Marvin, Rt. 3, LaJunta, Colo.

EGGS—SINGLE COMB WHITE LEGHORNS, 90% fertility guaranteed; $8 per 100. Request catalog. H. M. Wells, Box 297-T, Auburn, Neb.

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FOR SALE—EGGS FOR HATCHING; SEVERAL fine strains. Write us for prices and information. Wiswall's Poultry Yards, 1300 Willow St., Trinidad, Colo.

LARGE SINGLE COMB WHITE LEGHORNS—Winter layers; hatching eggs, $6 per 100. Baby chicks, $12 per 100, postpaid. Westwood Farm, Waco, Neb.

BUFF ORPINGTON EGGS—SPLENDID FLOCK; fine type, color, $5.50 per 100. Special matings. Eggs, $3 per 15. Mrs. Wm. J. Keller, Harvard, Neb.

EGGS FOR HATCHING FROM OUR HOGANIZED flock of dark Single Comb Reds; pens, $5 a setting; flock, $7 per 100. The James Sisters, Olathe, Kan.

PUREBRED BARRON WHITE LEGHORNS—White quantity eggs needed. Will quote prices accordingly. Cannon Ball Poultry Farm, Mullinville, Kan.

ENGLISH TOM BARRON S. C. WHITE LEGhorns; flock headed by cockerels of 288—304 egg strain; 100 eggs, $5. Mrs. Henry Wegman, Jr., R. 4, Sabetha, Kan.

WINTER LAY SINGLE COMB DARK BROWN Leghorns; chicks, 12½c each. Eggs, $5 per 100, prepaid; safe delivery guaranteed. Mrs. Ralph Griffith, Rogersville, Mo.

EGGS FOR HATCHING—ROSE COMB RHODE Island Reds exclusively; prize winning, heavy laying strain; five pens mated. Write for mating list. E. A. Miller, Alma, Neb.

HARRISON'S EXHIBITION EGG STRAINS; SINgle and Rose Comb Reds. Breeding stock, eggs for hatching; baby chicks. Get Red Breeders' Bulletin. Harrison Red Farms, College View, Neb.

S. C. WHITE LEGHORN EGGS—CHICKS, FROM 32 prize-winning birds with highest egg production. The kind you want. Request mating list. Underwood Poultry Farm, Hutchinson, Kan.

QUALITY WINTER LAYING S. C. W. LEGHORN baby chicks and hatching eggs, by prepaid parcel post. Safe arrival guaranteed. Mating list free. Brenna Poultry Farms, Rt. 3, Wayne, Neb.

ROSE COMB BROWN LEGHORN EGGS, EXTRA selected heavy producing stock; Hoganized 5 years; flock headed by sons of 254-egg pedigreed male. $2 for 15; $4.50, 50; $8, 100. J. M. Billingsley, Lexington, Neb.

"RYAN'S" SINGLE COMB DARK BROWN LEGhorns; best blood lines; Hoganized; satisfactory shipments guaranteed. Eggs, $5.50, chicks, $13 per 100, prepaid. Ryan's Poultry Farm, Centralia, Kan.

BUFF ORPINGTON EGGS AND BABY CHICKS from our heavy laying and exhibition strain. Also Anconas and S. C. Rhode Island Reds, eggs from exhibition stock. Roup & Son, 979 Carroll Ave., Ames, Iowa.

PUREBRED DARK BROWN R. C. LEGHORN hatching eggs, $6 per 100. Also baby chicks after March 1, $13 per 100. Hogan tested stock. Booking orders now. Mrs. Arthur Henkle, Route 1, LeRoy, Kan.

EGGS, CHICKS—SINGLE COMB WHITE LEGhorns, bred for egg production. Eggs, March $10 per 100. Chicks, March, $16 100; April, $15 100. Request catalog for quantity prices. H. M. Wells, Box 297-T, Auburn, Neb.

GOODWIN'S BIG TYPE S. C. WHITE LEGhorns, winners in Utility Class at Colorado State fair and Canon City show. Baby chicks, hatching eggs. Write for catalogue. W. W. Goodwin, Route 2, Canon City, Colo.

SINGLE COMB ANCONAS, THE KIND THAT produce eggs at least cost per dozen; eggs for hatching from our trap-nested heavy laying strain $7 per hundred. Now booking orders; ship anywhere after March 1. A. C. Penry, LaJunta, Colo.

S. C. WHITE LEGHORNS, STANDARD QUALity; the best winter layers. Hatching eggs and day-old chicks from yearling hens on free range. Prices reasonable. Book your order early. Willow Creek Poultry Farm, Box 657, Lamar, Colo.

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EGGS—PUREBRED BARRED ROCKS, WHITE Leghorns, Buff Orpingtons, Rhode Island Reds, Silver Laced Wyandottes, $1, 15; $1.75, 30, $5, 100, postpaid. Chicks, 15c postpaid; guaranteed alive. Alfred Young, Wakefield, Kan.

WARREN'S QUALITY WHITE ROCKS, FISHEL strain direct, winners of firsts and sweepstakes for five years in Jewell county. Breeding stock carefully selected, "eggs" and "baby chicks" for sale. Warren's Eclipso Poultry Farm, Mankato, Kans.

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SINGLE COMB WHITE LEGHORNS, VERY large type, pure white, standard bred; pens, Hoganized 200 to 250 egg type; breeder for seven years. Specialty, heavy winter laying strain. Hatching eggs, day-old chicks. T. C. Mountain, La Junta, Colo.

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TURKEYS.

FOR SALE—EIGHT MAMMOTH BRONZE MALE turkeys, $8 each, F. O. B. Wiggins. The Nile Farms, Wiggins, Colo.

BRONZE TURKEYS, NATIONAL WESTERN AND Heart of America winners. Brown Chinese Geese. Cora DeFrance, Berthoud, Colo.

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BUFF DUCKS—SUMMERSLOPE FARM, STILLwater, Okla.

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WE DON'T ONLY DEAL IN SEEDS, BUT SELL the gardeners products—would it pay us to supply him with poor seeds—that wouldn't pay, would it? We are offering you the same seeds we supply the gardener with whose goods we handle—can't we supply you also? The Rocky Mountain Seed Co., Denver, Colo.

NURSERY STOCK

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THE CLARK SEEDLING STRAWBERRIES HAVE made Hood River famous as a strawberry growing district. Have made more money for the growers than any other strawberry grown on the Pacific Coast. Trees 2 to 10 cm. Oregon Champion Gooseberries, large or small lots. Write for prices. W. R. Gilson & Son, Rt. 2, Hood River, Oregon.

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TOBACCO—KENTUCKY'S PRIDE, EXTRA FINE chewing, 10 lbs., $3.25. Mild smoking, 10 lbs., $2.75. Farmers' Club, Mayfield, Ky.

HOME-SPUN TOBACCO—MILD AND MELLOW chewing and smoking, 5 lbs., $1.50; 15 lbs., $3.75. Pigeon Roost Tobacco Co., Sedalia, Ky.

TOBACCO—KENTUCKY FINEST HOME-SPUN, chewing, 10 lbs. $3.10; smoking, 10 lbs. $2.60; 20 lbs., $4.50. Producers' Exchange, Mayfield, Ky.

KENTUCKY FINEST NATURAL LEAF CHEWing tobacco; 10 lbs., $3; smoking, 10 lbs., $1.85; 20 lbs., $3.50. Producers Exchange, Mayfield, Ky.

LEAF TOBACCO, THREE YEARS OLD; PAY for tobacco and postage when received. Chewing, 5 lbs., $1.50; smoking, 6 lbs., $1. Farmers Grange No. 71, Hawesville, Ky.

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KENTUCKY LEAF TOBACCO—3 YEARS OLD, nature cured. Don't send a penny, pay for tobacco and postal on arrival. Extra fine quality chewing or smoking, 10 lbs. $3; medium quality smoking, 10 lbs. $1.25. Farmers' Union, D22, Hawesville, Ky.

INVENTIONS.

INVENTIONS WANTED—CASH OR ROYALTY for ideas. Adam Fisher Mfg. Co., Dept. 204, St. Louis, Mo.

RECORD YOUR INVENTION—SEND FOR FREE "Inventor's Handbook." Send sketch or model for free opinion as to patentability. G. E. Feeney & Co., 27-42L LeDroit Bldg., Washington, D. C.

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HONEY—PURE EXTRACTED, 10 LBS. $2, PREpaid inside 600 miles. J. P. Lundahl, Greeley, Colo.

"THEBESTO ROCKY MOUNTAIN HONEY," none better; satisfaction guaranteed or money back; five-pound can, postpaid $1.50. Send remittance with order. Write for price on large quantities. The Colorado Honey Producers Association, Denver, Colo.

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If within the next fifteen days you send us your subscription for six months, with the remittance, we will make you a present of a full-colored 3-sheet auto route map, showing on one sheet in detail all auto and railroad routes and towns in Colorado. On another sheet a map of the United States, and on the third sheet a world map and map of Central Europe. On the back of each sheet is shown latest census figures.

Sheets are 36 inches in length by 30 inches top to bottom, metal bound at top with hangers. This map will be mailed you free by parcel post the day your subscription is received.

USE THE COUPON BELOW AND SPECIFY WHICH PAPER YOU DESIRE.

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Tenant Farming Increases.

Tenant farming in the United States is growing faster than census figures on the number of farms would indicate, says Dr. C. L. Stewart, economist in land economics of the United States Department of Agriculture. The increase in acres rented, since 1910, has been 20 per cent, as compared with an increase of 14 per cent for the preceding decade, and the increase in value of land rented has been 111 per cent, as against 135, while the increase in number of farms rented has been but 4 per cent, as against 16 for the ten years 1900 to 1910.

"In most sections farms operated by tenants differ in size and value from those operated by owners," said Dr. Stewart. "Moreover, there are large areas of rented land farmed by so-called 'part owners'—men who own farms and rent additional land. This land is not accounted for in figures for tenant farms. In 1920 this part-owner tenancy involved 89,000,000 acres, which added to the 265,000,000 acres reported in tenant farms, swells the total of rented land to 354,000,000 acres, and the valuation from $24,000,000 to about $28,000,000 in 1920.

"On this basis renters operated 37 per cent of the farm lands of the United States in 1920, representing 42 per cent of the improved farm acreage and 44 per cent of the total valuation of the land, both improved and unimproved."

The vastness of the area of farm lands under lease, and the seriousness of the problem of farm tenancy, are emphasized when it is pointed out that, if all the half billion dollars made available to borrowers through the Federal Farm Loan system during the past five years had been used to finance tenants in buying farms instead of the 5 per cent actually thus used, it would have covered with first mortgages less than 5 per cent of the $28,000,000 worth of land now operated by tenants.

Need More Brood Sows and Pigs On Our Farms.

(Continued from Page 11.)

raising pigs. Some one has said, "Hitch your wagon to a star," but the farmer who forgot all about the stars the past three years and hitched his wagon to hogs is on the right side of the ledger and has bright prospects for the future.—Earl A. Riggs, Weld county, Colo.

Pork From Sweet Clover Pasture.

THIRD PRIZE LETTER.

Starting with four bred sows in 1920 my gross returns for the first season for ten shoats sold, three of the original sows and four butchered and sold, was $429.50, and we butchered three for our use, dressing 200 pounds each. I had one of the original sows left and seven of the gilts for breeding. I bought these sows in April and they did not farrow until June and July. They were too fat, but it was hard to find sows that suited me. When I got them home I turned them out on 160 acres of creek bottom sweet clover pasture without grain and made them rustle like range cows. Two or three weeks before they were due to farrow I began giving them two or three ears of corn apiece. This treatment reduced them seventy-five or one hundred pounds apiece in weight and brought them to farrowing about right.

Sows Too Fat.

The four sows farrowed only twenty-four pigs. I attributed the small litters to their being too fat at breeding time and to its being their first litters. I sold ten shoats to a neighbor at 14 cents a pound when they averaged 140 pounds a piece, receiving $196. Seven of the best gilts were retained for breeding. They now weigh 300 pounds apiece. One shoat was butchered, dressing 200 pounds, and turned on a doctor's bill of $28. Three others were butchered and sold to pay a grocery bill. They brought 13½ cents a pound, averaging $23.50 apiece. In September I sold three of the original brood sows, averaging 375 pounds in weight, at 12 cents a pound ,or $45 apiece. This left me the one original sow and the seven gilts which I still have. I figured that deducting the $90 I paid for these gilts, I had a net cash return of $339.50, not counting the feed and labor. I could not count the crop much, for it was frost-bitten and could not have been sold on the market.

Bank House Warm in Winter.

Much of my success in raising hogs is due to good housing. I put each sow in a house by herself at farrowing time. The house I have is dug in the side of a bank three feet high. Each pen is six feet wide and ten feet long. A fence post supports the middle of the roof which is covered with dirt. This makes it as warm as a cellar in winter and as cool as one in summer. I always build on bank facing the south, so that they can get the sunlight all day long and when the north wind blows they never get chilled. I have had pigs come when it was 12 degrees below zero and not lost a pig. During the day the pigs are out, as it is not good for them to be shut in a close pen all day. I let them have the run of 160 acres all the time. A brood sow needs plenty of exercise. I wean the pigs when they are six weeks or seven weeks old and try to have all the sows farrow at the same time, as it is not so hard to take care of them when I wean the pigs. I just give them water and dry oats on the ground where it is clean. The pigs are fed all the corn they can eat and in a week's time the old sows can be turned back in the pasture with the pigs and not a pig will go near its mother.

I feed the sow only two or three ears of corn twenty-four hours after the pigs have come, and give water with the chill taken off. I gradually increase the feed to a full feed by the end of a month. After that there is no danger for six or eight pigs will take all the milk a sow will produce. Encourage the pigs to eat as soon as possible. There is no better feed for them than soaked corn, ground oats or barley made into a swill, and fed sweet. If swill becomes sour add a little baking soda. Do not feed pigs more than they will clean up. There is nothing that will beat ear corn and water for fattening.

Provide Shade in Summer.

In the fall of the year when I start to fatten, I feed in a grove of cottonwood trees. A ditch runs through the grove and they have plenty of clean running water. If I did not have the grove I would fix a shade of boards. By all means keep clean water in the troughs all the time. They should be fed at regular hours. A hog is a clean animal and will not lie down in filth if he can help it.

An A-shaped cot makes a good farrowing house. The angle of the roof at the bottom prevents the little pigs from getting mashed when the old sow lies down. I dig a little trench in the floor around the outside and when the sow lies down against the wall a pig caught at her back will be squeezed into this trench and not be injured.

I now have eighty pigs farrowed in December and January from eight sows I had last year, and six gilts. The fourteen had eighty-five pigs, but I sold three and lost two from their all crowding into the same pen one night. Be sure and shut the sows and litters up by themselves when the pigs are little. If you let two or more sows pile up you will find dead pigs in the morning.

Be kind to your brood sows; pet them, and talk to them so that you can get in with them when they are farrowing. I have never had a sow that I was afraid of. I can pick up their pigs and one cannot do this with a sow if he is not on good terms with her.

My boar is a purebred Duroc Jersey weighing when in breeding condition between 650 and 700 pounds. I have the winter pigs all weaned and the sows rebred for April pigs.

Last December I sold my spring shoats, thirty-five head, when the market was low, getting $320 for them. They weighed around 130 pounds apiece. My winter pigs now weigh from forty to sixty pounds apnece. I am feeding them corn and wheat and expect to make them weigh 160 to 175 pounds apiece by July 1. It will be three or four months before the spring pigs will be going to market and I expect to hit a good market for these winter pigs. —Ben E. Johnson, Morgan county, Colo.

Winners of Prizes in Contest.

We wish to express our appreciation of the response to our offer for letters telling of experiences in hog raising. The first prize of $5 goes to Hilton A. Smith, Morgan county, Colo.; second prize of $2 to Earl A. Riggs of Weld county; third prize of $1 to Ben E. Johnson, Morgan county; fourth prize of $1 to Glen Middagh, Saguache county; and fifth prize of $1 to B. S. Brown, Wyoming. The following are given honorable mention: A. L. Mason, Washington county, Colo.; W. P. Harp, Weld county, Colo., and Wm. B. Hathaway, Garfield county, Colo.

Man works for money. If he saves, money will work for him.

Color Your Butter

"Dandelion Butter Color" Gives That Golden June Shade and Costs Really Nothing. Read!

Before churning add one-half teaspoonful to each gallon of cream and out of your churn comes butter of Golden June shade to bring you top prices. "Dandelion Butter Color" costs nothing because each ounce used adds ounce of weight to butter. Large bottles cost only 35 cents at drug or grocery stores. Purely vegetable, harmless, meets all State and National food laws. Used for 50 years by all large creameries. Doesn't color buttermilk. Absolutely tasteless.
Wells & Richardson Co., Burlington, Vt.

Dairying and Hog Raising

All letters regarding commercial and technical features of dairy farming and hog production promptly answered. Address all communications to Dairy Department, Western Farm Life, Denver, Colorado.

Prosperity Brought by Purebreds.

Five hundred replies to a series of questions on the utility value of purebred livestock have been received by the Bureau of Animal Industry of the United States Department of Agriculture. The questions were sent to progressive farmers in all parts of the country, and they are almost unanimous in praising the purebred as the fount from which the stream of prosperity flows. The writers of these letters, all of whom have taken the pledge in the "Better Sires—Better Stock" campaign, place varying values on the purebred as compared with the grade and the scrub, but nearly all of them agree in spirit with the Nebraska farmer who wrote as follows:

"I desire to thank the originator of this questionnaire, for he has struck the keynote of better livestock. A purebred is either better for utility purposes or not, and since it always costs more than one of mixed breeding it should return more in competition.

"The 'boss' of this farm is not blessed with a large family nor an overplus of muscular force, therefore everything must pay its way. We first saw the light with purebred Wyandotte chickens—found we had more uniform birds, more eggs, and a better market. Then wife began to keep books on our grade cows, and I discovered that I had been chambermaid for a bunch of star boarders. So we bought a few purebred heifers (always had purebred males) and started without any idea of ever selling breeding stock—just to have good milkers and sell the calves as baby beef. Well, the neighbors liked the purebreds better, and they came and bought the surplus; still doing it.

"Notice we stress utility. If the pedigree is fancy, all well and good; but the individual must make good on the utility basis. Foundation stock has gone to four adjoining states and to most of the counties lying close without expensive advertising or public sale. Common stock and culls are never priced as breeding stock."

Another farmer from the same part of the country writes an inspiring story in a few simple words. He says:

"I am much pleased to add my little to your work, but it appears it is hard to get some farmers to realize the advantage of purebred stock and modern equipment. I will just say that my wife and I started 26 years ago on a rented farm with a very little property and some debt. We now have one of the finest flocks of Leghorns, the best herd of Jerseys in this part of the state, and 240 acres of valley land with modern improvements. We never fell heir to any money, but lay our success to the keeping of purebred stock and giving it the right care. People in our town buy our milk at 10 cents a quart and want more. We now have 45 Jerseys, 1,000 Leghorns, and 100 Duroc hogs, all purebreds. I am your friend."

Almost without exception farmers who raise purebred animals make statements of this sort. They are through with the scrub forever.

Eradicating Livestock Diseases.

Tuberculosis, the worst enemy of the livestock industry, is now definitely slated for ultimate eradication, the plan of attack having been already laid out and successfully demonstrated by the Bureau of Animal Industry of the United States Department of Agriculture. The success of the different phases of the plan and figures showing the progress made are given in the annual report of the bureau, recently issued. In the beginning of the campaign, which began four years ago, most of the work was devoted to cleaning up and accrediting individual herds, but now that sentiment has been sufficiently aroused, definite areas in various states are being freed of the plague, and it is shown that its eradication is as feasible as the cleaning out of the cattle tick in the Southern states.

Although unfortunate entanglements with political issues have delayed the work in some localities, the territory relieved from the grip of the tick has been increasing gradually, and the time is not far distant when this enemy of the livestock industry will no longer be a factor in the cost of meat and milk production. More than 32,000 square miles were released from quarantine during the year, and since the beginning of the fight in 1906 more than 500,000 square miles have been freed, which is better than 70 per cent of the original ticky area.

The elimination of hog cholera, on the other hand, is considered a remote possibility, but the bureau reminds swine growers that they may reduce their losses to a negligible amount by precautionary measures, including the serum treatment. There are a number of other livestock diseases of a serious nature that continually threaten to invade the flocks and herds of this country, but during the year none of them passed the guard maintained by the bureau at all ports and along the borders. Foot and mouth disease in western Europe and rinderpest in the Philippines are among the most imminent dangers to our livestock.

Livestock Farming Fundamental.

Livestock farming is a more complicated type of farming than simple crop farming, but for that very reason it offers greater opportunities for the use of individual ability. The dairyman who converts his farm feeds into milk and butterfat before putting them on the market is selling more skilled labor than the man who simply produces the feeds. There is always less competition in skilled labor production and as a rule the selling of finished animal products brings a larger return for the labor involved than selling the raw material from which the milk, butter, eggs, or meat, are produced.

There are ups and downs in the livestock business, but the ones who suffer most by the downward trends are those who have not fully mastered the details of successful livestock farming. They are the ones who go in and out, always in the hope to be in when profits are at the maximim, and out when margins of profit are narrow, but usually getting in when stock is high and out when it is low. The in-an-out game does not pay in livestock farming. There will be periods when the size of the livestock business must be varied to keep in line with existing conditions, but the true livestock man never gets out entirely.

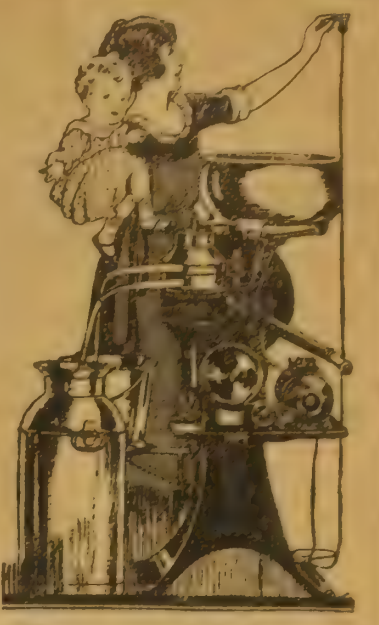
Imported Dairy Cows Make Good.

Dairymen of Saguache county are very well pleased with the dairy cows brought in through the activity of the county farm bureau. Of ten head which have freshened all are producing at least four gallons of milk a day. Five, which are being fed silage, are giving five gallons a day. C. E. Gibson, who brought in eleven and purchased two others locally, is getting forty gallons of milk a day and figures that his cows are bringing him a net profit of $60 a month. He is getting only 26c a pound for butterfat and allows 7c a gallon for the skim milk as hog feed. It will not take long to pay for these cows he brought in. J. H. Rodman and W. M. Middagh are milking four or five of the cows each and report satisfactory results. The next step will be to get the new cows bred to good purebred bulls with heavy production records behind them. The farm bureau plans to do some butterfat testing the coming summer. Already some of the men are keeping records on the milk production.

More Cows and Sows on Farms.

Marketing grain and farm grown feed on foot or in the form of concentrated livestock products is the essence of mixed or diversified farming. It is a far safer type of farming than single-crop farming of any kind. It causes us to pause and consider when we note that a 200-pound hog, a can of cream, or a case of eggs, will bring as much money as an acre of dry land wheat or corn. Why not market some of this grain or at least the less marketable of it through the livestock, thinks the man who is studying the problem. There is a place on every Colorado farm for a few good cows and some good hogs, says D. A. Jay in "Through the Leaves." And the emphasis should be on the good, for the kind of livestock kept is an important factor in economic production. There is always waste grain even when prices are high, which can be converted into salable products through the cow and as pork.

"In my observation over the state,"



You pay for a
De Laval
whether you buy one or not

If you are using a worn-out, inferior cream separator, or skimming cream by hand, you are surely wasting enough cream to pay for a De Laval in a short time.

The selection of a cream separator is more important than that of any other machine on the farm, for none other can either save or waste so much, twice a day, 365 days a year.

A De Laval Separator will:

—Skim cleaner for many more years than any other;

—Skim milk clean at lower temperature than any other separator;

—Deliver a higher testing cream, which is more acceptable to the creamery, and easier and less costly to ship,

—And deliver a cream which will make better butter.

Mechanically a De Laval Separator is the best that fine materials and skilled workmanship can make.

—It lasts longer than any other separator, many giving good service for 15 to 20 years.

—It is easier to turn.

—It is easier to clean.

—It is so simple that one tool will set it up or take it down.

—It has the most perfect lubricating system.

Do not be deceived by separators which are claimed to be "just as good and cost less." When you consider its greater savings, greater reliability, longer life, the extra time it saves, and the greater satisfaction it gives, the De Laval is, in the end, by far the most economical cream separator made.

Even if you have only two cows it will pay you to have a De Laval. One can be bought on such easy terms that it will pay for itself in less than a year. Why not see your De Laval agent at once or write us for full information?

—*The*—
De Laval Separator Co.

New York 165 Broadway
Chicago 29 E. Madison St.
San Francisco 61 Beale St.

Sooner or later you will use a
De Laval
Cream Separator and Milker

says Mr. Jay, "I was surprised to find the number of farms with no hogs. True, certain sections of Colorado can never be used for anything but grazing, and cattle and sheep will predominate. But the cow and sow on our grain farms is a factor not to be overlooked. A few good cows, bred to freshen in the fall, work into a diversified program of farming very satisfactorily. During the summer months, the farmer is busy with the grain crops. These crops must be planted, cultivated and harvested. Milk cows are liable to be neglected, but if bred to freshen after the rush of the season's work, their big flow of milk is produced when the price of butterfat is at its peak. This is a more slack period of the year and more time can be spent with details, particularly the regularity in feeding and milking, a very important factor in efficient milk production. Silage of course, is essential as a substitute for grass, and 'canned corn helps to make contented cows.' Succulence and contentment increases milk flow.

"Brood sows bred to farrow early gets the pigs started before the rush of the spring work. By the use of the self-feeder, the pigs can be developed with the minimum amount of labor. A fall crop of pigs can be successfully raised where good housing facilities are available. True, they require a little more care, but with good warm, dry, well lighted sleeping quarters, and plenty of skim milk added as a supplement to the grain feed, they can successfully be finished for a good market, which usually prevails during the spring months.

"No system of permanent agriculture overshadows that of mixed husbandry. The farmer who has been practicing a diversified system of farming, was less affected by the deflation in prices on farm products. The right side of the ledger, however, looks bad enough.

"Several thousand feeder hogs were shipped out of Colorado in 1921 to be finished on cheap corn in the cornbelt. The wheat crop on our Colorado farms brought in a reasonable cash return, but there is an abundance of corn and barley that is worth very little on the market. Couldn't our Colorado grown stock hogs be finished on Colorado grown feed and marketed at home in Colorado? Every Colorado farm can grow what they feed and feed what they grow. Each farm can be both a producing unit and a finishing unit. Watch the leaks. Stop the waste—let's have a more efficient system of farming.

"Colorado needs more cows and more sows on every farm."

Market Outlook for Farm and Ranch Products.

(Continued from Page 13.)

action of corn, although the advance in prices has been proportionately less upon the lighter cereal. Some export demand is appearing, but the visible supply is still enormous and primary receipts are holding up better than expected.

Farm holdings of oats on March 1, according to unofficial reports, were about 470,000,000 bushels, compared with 684,000,000 bushels on the same date in 1921. The total was the smallest since 1911. When the large visible supply is considered, however, the oats situation is not as serious as it was expected to be by this time in the crop year.

Cash Grain Markets.

The range of cash grain prices follows:

Kansas City—Wheat: No. 3 red, $1.30@1.38; No. 4, $1.24@1.28; No. 2 hard, $1.31@1.53; No. 3, $1.30@1.53; No. 4, $1.18@1.49. Corn: No. 2 mixed, 55½@58½c; No. 2 yellow, 56@59c; No. 2 white, 55½@59c. Oats: No. 3 white, 38@38½c; No. 4, 37@37½c. Barley, 55@57c.

Weather Helps Hay.

Cold weather and snows over large areas have helped the demand for hay and at the same time have obstructed the movement from surplus sections. Higher prices have been recorded, especially in the Northwest. The South is a heavy buyer at this season and the northern and eastern sections are expected to purchase more freely during the next month or two, as supplies of forage are becoming depleted.

Kansas City—Prairie No. 1, $10.50@12; No. 2, $7.50@10; No. 3, $5.50@7. Timothy—No. 1, $13.50@14.50; No. 2, $10@11.50. Alfalfa—Choice, $22@23.50; No. 1, $19.50@21.50; standard, $16@19; No. 2, $12.50@15.50; No. 3, $10@12. Clover—Mixed light, $13@14; No. 1, $10.50@12.50; No. 2, $7@10. Straw, $6@6.50.

Egg Market on Down Grade.

Although there have been numerous upturns, the egg market has been headed down hill during the last six weeks. Prices are 3 to 5 cents higher than the low point reached in the spring of 1921, so that the spring slump should be practically at an end. Receipts are increasing and withdrawals from cold storage are inconsiderable. Stocks of the latter at the four leading cities are down to only 1,872 cases, compared with 9,821 cases at this time last year. Within another week or two, the movement into storage will expand. Poultry prices have advanced sharply in the last sixty days.

Denver—Eggs, 25c. Live poultry—Hens, 25c; springs, 38c; roosters, 15c. Geese, 30c. Ducks, 30c.

Butter Production on the Increase.

Butter production is gradually increasing, according to reports to the American Creamery Butter Manufacturers' Association. The increase is small, however, and may not become a big factor in the market for another month. Prices recently have been comparatively firm as a result of severe storms in some of the sections of heavy production which delayed shipments to markets. Receipts at the four leading cities during the last week, however, were materially larger than in the corresponding week of 1921. Demand also has increased to some extent as buyers were disposed to take more than their immediate requirements and a large quantity of butter was removed from cold storage. The undertone of the market is rather nervous, with a prospect of lower prices within the next thirty days, although there may be but little change during the next week or two.

Prices for 92 score fresh butter on March 3 were: Chicago, 37c; New York, 38c; Boston, 38c; Philadelphia, 38c.

Potato Prices More Firm.

Total season's shipments of potatoes from the leading eighteen states have been nearly 25 per cent larger than in the same period of the previous crop year. The movement from producing sections has slowed down and prices have been more firm. The supply for the rest of the season appears ample. Round whites sacked are quoted at $1.80 to $2.35 per 100 pounds in various consuming markets.

You use a silage cutter on your farm. Does your wife use a vacuum cleaner?

Recent Range of Livestock Prices at Our Principal Markets.

Cattle—	Denver.	Kansas City.	Omaha.
Choice and prime heavy steers (1100 lb. up)	.....	$8.35@ 9.40	$8.00@ 9.00
Good heavy steers	.....	7.65@ 8.50	7.50@ 8.25
Medium heavy steers	$6.25@ 7.25	7.10@ 7.80	7.00@ 7.65
Common heavy steers	5.50@ 6.50	6.35@ 7.30	6.25@ 7.25
Choice and prime light steers (1100 lb. down)	.....	8.15@ 9.10	8.00@ 9.00
Good light steers	.....	7.40@ 8.30	7.50@ 8.25
Medium light steers	6.50@ 7.35	7.00@ 7.60	7.00@ 7.50
Common light steers	5.50@ 6.50	6.10@ 7.10	6.25@ 7.00
Common to choice butcher heifers	4.25@ 7.00	4.60@ 7.50	4.50@ 7.50
Common to choice butcher cows	3.75@ 5.75	4.25@ 6.15	4.25@ 6.50
Bologna and beef bulls	2.00@ 4.25	3.25@ 5.15	3.50@ 5.50
Canners and cutters, cows and heifers	2.00@ 3.50	2.75@ 4.35	3.00@ 4.25
Canner Steers	2.50@ 3.50	3.25@ 4.00	3.25@ 4.00
Medium to choice light veals	8.50@11.00	7.25@11.00	7.25@11.00
Common to choice heavy veals	.....	4.25@ 8.75	4.50@ 8.25
Common to choice feeders (1000 lb. up)	.....	5.85@ 7.85	5.50@ 7.75
Common to choice feeders (750—1000 lb.)	5.00@ 7.00	5.85@ 7.75	5.25@ 7.50
Common to choice stocker steers	.....	4.90@ 7.65	5.00@ 7.75
Common to choice stocker cows and heifers	.....	3.75@ 6.25	3.75@ 6.00
Hogs—			
Top of Market	$ 10.80	$ 11.20	$ 10.90
Bulk of Sales	10.15@10.65	10.30@11.15	10.15@10.85
Heavy (250 lb. up)	9.80@10.15	10.00@11.00	10.15@10.85
Medium (200—250 lbs.)	10.00@10.50	10.50@11.15	10.25@10.90
Light (150—200 lb.)	10.00@10.65	10.40@11.20	10.40@10.90
Light lights (130—150 lbs.)	9.85@10.65	10.25@11.15	10.25@10.75
Smooth packing sows (250 lb. up)	8.50@ 9.25	8.10@ 9.85	9.00@10.00
Rough packing sows (200 lbs. up)	7.25% 8.50	7.75@ 9.00	8.50@ 9.50
Medium to choice pigs (130 lb. down)	8.50@ 9.25	.....	.....

Dairymen Must First Learn to Feed for Milk.

(Continued from Page 5.)

pasture mixture suitable for Colorado conditions on irrigated land. The oldest pasture on the college farm was planted in 1909. The mixtures have been changed many times by Professor Morton in the twelve years he has been working on this problem as practical experience proved the value or lack of merit of the various grasses being tried.

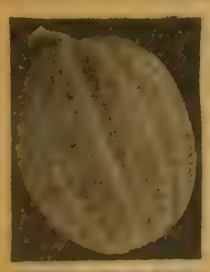
The mixture now being recommended is known as Morton's pasture grass mixture and has given good results in nearly all sections of the state. It is given in the service department of this issue. At present prices fifty pounds will cost around $8 and it is recommended that this amount be seeded to the acre, for it is highly desirable to get a thick sod as soon as possible. It was pointed out that those who seed this mixture profit from the twelve years of Professor Morton's experience. It has been found to be a good practice on low lying wet soils to reduce the orchard grass and brome grass and add redtop and more timothy. On a few Western Slope areas Kentucky blue grass may be added.

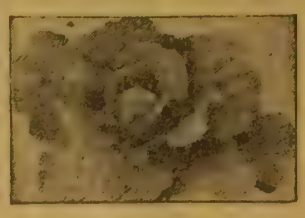
Methods of Seeding.

A pasture can be used a long time and it will pay to take the greatest pains in seeding. Upon the seeding and care will depend in large measure the success of a tame pasture. The seed bed must be carefully prepared. The seed cannot all be sown together. The brome grass, meadow fescue, and the orchard grass can be sown together, and the timothy and sweet clover at the second seeding. Broadcast seeding is recommended, covering with a harrow. A light cover crop of oats or barley is advisable cut as hay. Take a crop of hay the second season, thus allowing the grasses to become well rooted before pasturing. The orchard grass and the brome grasses will be the heavy yielders of this mixture. Brome grass makes a very thick sod. The college pastures carry two animals to the acre.

Pasture grass is considered as near a balanced ration of any one feed that we can get. With an abundant supply of Nature's palatable, inexpensive, succulent, nutritious and well balanced food, we can lower the cost of production of milk and butterfat. Then after pasture season is over, imitate the pasture season as near as possible the rest of the year. This necessitates the silo. Silage has aptly been referred to as grass in winter, and in some sections they add "and without the flies and extreme heat."

Charts of all kinds served to emphasize the points made from the platform and one of the outstanding facts brought out was the necessity for record work, such as is made possible through the cow-testing association. The dairyman is working in the dark without some sort of records.





Special Seed Offer

With Your Western Farm Life Renewal

Get your garden seeds early. Many varieties of seeds were very short last year. Many late buyers had to go without. Order your seeds now. This collection of seeds is the biggest value we have ever offered. It is just the right kind of an assortment for the family garden, and all seeds are guaranteed to be fresh and reliable and the very best that money can buy.

OUR OFFER

1 Pkt. BEET, Early Eclipse.
1 Pkt. CABBAGE, All Season.
1 Pkt. CARROT, Oxheart.
1 Pkt. CUCUMBER, Everbearing.
1 Pkt. LETTUCE, Black Seeded Simpson.
1 Pkt. MUSKMELON, Rocky Ford.
1 Pkt. WATERMELON, Kleckley's Sweet.
1 Pkt. BEANS, Choice Garden.
1 Pkt. ONION, Yellow Globe Danvers.
1 Pkt. PARSLEY, Champ. Moss Curled
1 Pkt. PARSNIP, Imp. Hollow Crown.
1 Pkt. RADISH, Prize Mixture.
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You get all of the above 17 packets of choice seeds, parcel post prepaid, and a two-year subscription (new or renewal) to WESTERN FARM LIFE, for only $1.25

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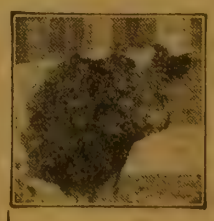
SHORTHORNS.



TOPS CHICAGO MARKET FOR 1921

Sixty-two Shorthorn steers, yearlings, weighing 1101 lbs., made the high price of the year at the Chicago market, $11.50 in October, fed by Brown Hutt, New Berlin, Ill. They weighed 448 when placed on feed in November and gained 653 lbs., two pounds per day, in 11 months. Some gain! Some quality! Some profit!

American Shorthorn Breeders' Association, 13 Dexter Park Ave. Chicago, Ill.

SUNNYSIDE ROBERT

SHORTHORNS

We have for sale cows, and cows with calves by side, and heifers. Scotch and Scotch tops. A few choice bulls left. We make 'em make good. Write us.

GLEASON & BLAZER, Kiowa, Colo

SHADELAND STOCK FARM

BREEDERS OF

SHORTHORN CATTLE

Herd headed by Maxwalton Rustler, a grandson of Avondale.

Chester White hogs of best breeding stock for sale. Also Ringlet Barred Rock eggs for hatching. G. W. BALL & SONS, Pierce, Colo.

SHORTHORN BULL FOR SALE.

ADVOCATES URR, roan, calved Sept., 1919. Bred by H. F. Harmon. Sire, Imp. Advocates Model 647679. Dam, Maid Marian 138615; sire, Gladstone 239313. Dam, Merry Maid 2d 29528; dam, Nonpareil Victor 2d 258255. Dam, Merry Maid 72d; sire, March Knight 188105. Dam, Imp. Winsome Maid; sire, Marchison 192330.

H. F. HARMON, BOULDER, COLO.

PRIZE WINNERS

Shorthorns, Herefords, Guernseys, Holsteins, Jerseys, Poland Chinas, Duroc Jerseys, Including Grand Champion Poland China Boar.

Colorado Agricultural College, Ft. Collins, Colo.

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in Purebred Livestock from a big organization that spares no money to buy the best and specializes on purebred registered

Herefords ***Percherons***
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Breeding stock of all ages for sale.
Individual or carload lots.

MYRON STRATTON HOME FARMS,
James J. Gauld, Supt. COLORADO SPRINGS, COLO.

General B.

MILKING SHORTHORNS.

PRIZES

TAKEN BY THE

WYLDEMERE FARM Milking Shorthorn Herd

AT THE WESTERN STOCK SHOW, DENVER, 1922.

2nd Prize Royal Glenside.....Aged Bull.

1st Prize Calf Herd.....
1st Prize Get of Sire..... } The Get of Royal Glenside
1st Prize Young Herd.....
1st Prize Produce of Dam...

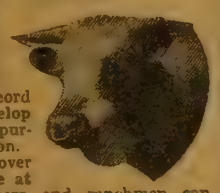
1st Prize Yearling Bull.....
1st Junior Champion .....
1st Reserve Grand Champion.. } The Get of Royal Glenside
1st Prize Junior Bull Calf .
1st Prize Senior Bull Calf...

1st Prize Senior Heifer Calf.
1st Junior Champion Female.
1st Grand Champion Female.
2nd Prize Two-Year-Old Heifer.
4th Prize Two-Year-Old Heifer.
4th Prize Senior Yearling Heifer.
2nd Prize Junior Yearling Heifer.
3rd Prize Junior Yearling Heifer.
4th Prize Junior Heifer Calf.

J. B. BENEDICT
Owner and Breeder.
Littleton, Colorado.
JOE GOETZFRIED, Herdsman.
NOTHING FOR SALE AT PRESENT.

Shorthorns That Milk

ARE MONEY MAKERS.



A herd that will give you a good monthly cash income is what you will need in the future. One of our young bulls from a Record of Merit cow can develop your herd into a dual-purpose paying proposition.

We know the war is over and have bulls for sale at prices that you farmers and ranchmen can afford to buy. Write for our bargain list and easy payment plan.

We also have several young bulls for sale, priced to sell.

THE PINE VALLEY DAIRY & FARMS CO.
Seeley G. Rose, Mgr. Colorado Springs, Colo.

Bates Shorthorns

are the foundation blood of true Milking Shorthorns. We have them. A few bulls for sale.

THE CARPENTER CATTLE CO.
GREELEY, COLORADO

Buy MILKING SHORTHORNS

from the oldest established herd in the state. We can supply your needs in bulls of beef type either horned or polled Shorthorns. Write Superintendent for folder on breeding and prices.

State Industrial School,
Golden, Colo.

MILKING SHORTHORNS

All Cows in Milk Officially Tested. Service bulls of World's Record breeding. Both males and females for sale. Personal inspection invited. Send for Illustrated Booklet.

THE BONVUE FARMS CO.,
Stockyards, Denver, Colo.

If in need of advice, ask Western Farm Life Service Bureau.

HOLSTEINS.

Only One Bull Left

Just one bull of serviceable age is left for sale in our herd. His dam made 15 pounds of butter as a yearling and will be tested for year's work this fall. She is a wonderful milker and the daughter of a 4-year-old with a year record of 25,208 pounds of milk and 878 pounds of butter, while the granddam of the bull's dam milked 108 pounds of milk in one day and 3,100 in 30 days. Two direct generations of 100 pound cows back of him. He is a good individual, mostly white, and sired by Denver Sir Segis, a 30-pound son of our senior herd sire, Johan Duchess De Kol Lad. What will this bull be worth to some good breeder?

Sanborn Meadows Holsteins.
MRS. R. G. DOUGLAS,
Rush P. O., Colo.

4 Registered Holstein Bulls

FOR SALE—One 3-year-old; three 2-year olds. Three are direct descendants of Pontiac Korndyke 25982, and the fourth carries Dirkie, DeKol, Aaggie and Nemea strains. For further information address

THE NILES FARMS,
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We have bred hundreds of prize-winning and high-producing Holstein cows, including

Tilly Alcartra

We can supply you with that same line of breeding. Write

McKAY BROS., Caddoa, Colo.

WALLIE FARM REGISTERED HOLSTEINS,
4800 S. Penn, Denver. W. G. Foster, Owner
Home of "Colorado Count," whose 29 sisters broke 140 world's records.

Bulls of Serviceable Age for Sale

Excellent individuals. World's record blood. Terms to responsible buyers. Wallie Farm bulls are guaranteed.

PRODUCTION
TYPE SIZE
BREEDING

We offer you a wonderful amount of these Holstein qualities—and from a clean herd. Bull calves from fine record dams. Pahgre Valley Ranch, Loesch Bros., Montrose, Colo.

Buy a Calf Out of This Herd

Twenty cows in this herd on an official seven-day test averaged 446.13 lbs. of milk and 20.19 lbs. of butter.

COLORADO STATE HOME,
2305 S. Wash. St. Denver, Colo.

D'ARCY HOLSTEINS

Have made good at home and they will do the same for you. A few choice calves can be purchased now at a price that can't help but make you money. Write

NORMAN R. D'ARCY
Parker, Colo.

GREAT BARGAINS, 960 HEAD HEREFORDS, SHORTHORNS, ABERDEEN ANGUS
1, 2, 3, 4 and 5 years old. Cows, heifers and bulls. Prices $75 to $120 and up. 360 Percheron and Belgian horses, stallions, mares and colts, 1 to 6 years old. Prices $125 and up per head. One head or a carlot. Breeding guarantees with each. Registered pedigrees by mail. Stock on twenty farms in Iowa and Illinois. Write for circular and particulars. Address ILLINOIS HORSE & CATTLE CO., Good Block, Des Moines, Iowa.

REGISTERED

Shorthorn Sale

40 HEAD

Thursday, March 30

20 COWS AND HEIFERS

with calf or calf at side.

15 YEARLING HEIFERS

Reds and roans. These are the right age for calf club work.

5 CHOICE BULLS

Roans and white, Cumberland breeding.

THESE BULLS ARE READY FOR SERVICE.

All cattle are now cheap. Selling worth the money and anyone having feed can afford a few registered animals.

I live thirty miles north of Denver, on the Lincoln Highway, adjoins City of Longmont.

WRITE FOR SALE CATALOG.

W. A. DICKENS, : : : Longmont, Colo.

HAMPSHIRE HOGS.

FOUR YEARS THE BEST

Meat Type Hampshires

The International Livestock Show is the test of hog producing power. Hampshires have won the grand championship in this test four years in succession—1918, 1919, 1920, 1921—in the hands of average farmers. No experts needed to make Hampshires win.

Hampshires are the greatest of all forage hogs, making the highest-priced pork out of the cheapest feeds on the farm. Active, vigorous and healthy, they raise exceptionally large litters. At the International they have shown, almost without exception, the heaviest spring pigs of any breed, carrying always the heavy, high killing, lean meat type. For free Hampshire information and for names of breeders in your neighborhood, address

Amer. Hampshire Swine Record Ass'n, E. C. Stone, Secy., Dep. 7, Peoria, Ill.

CLOVERDALE RANCH HAMPSHIRE HOGS

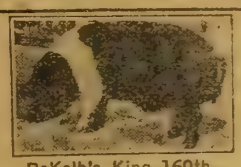
EARLY MATURING MARKET TOPPERS

Pay Dividends on the Investment. Only a small percentage of our fall litters were saved for breeding purposes, but they are extra good ones—well grown out. Inquiry for Hampshires is good and sales are increasing every week. Our hogs have been shipped into four different Rocky Mountain states this winter. Have only a few gilts left that are bred for spring farrow, and one or two choice young boars. Write us your wants today. Prompt delivery and satisfaction guaranteed.

N. E. MOSHER & SON, HUGO, COLO.

PUREBRED
Hampshires

by Grand Champion sires and dams. Breeding stock for sale.


DeKalb's King 160th.

C. S. BRATT & SON, ARAPAHOE, NEB.

DUROCS.

DUROCS

Gilts bred to my champion boars and June pigs from my great yearling "Golden Chief" and a daughter of the World's Grand Champion, Great Orion Sensation, can be seen at the Stock Show.

J. W. Brauer,
22 Lorraine St., Colorado Springs, Colo.

SPRING BOARS

Just a few real herd headers left ready to go at pre-war prices. Used with grade sows even, they will more than pay for themselves on the first crop of pigs. Write today.

C. C. Boyd, Yuma, Colo.
Livestock Auctioneer and Duroc Breeder.

GUERNSEYS.

GUERNSEYS

Sired by the Grand Champion bull at the 1921 National Western and State Fair, both male and female, are for sale. Write

H. D. PARKER
GREELEY, COLO.

"THE Quality of stock offered by Western Farm Life advertisers is good, and the low prices make this an exceptionally good time to buy.—Write advertisers for prices and terms."
—Livestock Fieldman.

POLAND CHINAS.

Mather's Big-Type Polands

sold to breeders in four states this year are giving satisfaction.

BUY WEANLING PIGS

at prices that will surprise you.

C. J. Mather, Longmont, Colo.

BIG TYPE
Poland China Pigs

SIRED BY F. B's LONG BOB.

White Leghorn Eggs, $2 per setting, $7 per 100; and Mammoth Bronze Turkeys.

F. B. MORGER,
R. F. D. 1, Box 18. FOWLER, COLO.

Maple Shade Farm Polands

WEANLINGS AT $20 EACH.

Pairs and trios not akin. Sires: Peter The Giant, Peter the First, N. C. Ranger. Dams: By Buster of the Clan, Liberator, Emancipator, Otis's Giant, Long Joe.—Bred Gilts Immune. Registered. F. O. B. Sarcoxie, Mo.

W. W. PELSUE, Carthage, Mo. Rt. 3.

HEREFORDS.

THE MARKET LOOKS PROMISING.
RESTOCK NOW WITH

HEREFORDS

Some choice heifer calves and a few bulls of Beau Santos and Bright Stanway breeding are for sale.

J. D. Craighead, La Junta, Colo.

D. S. Polled Herefords

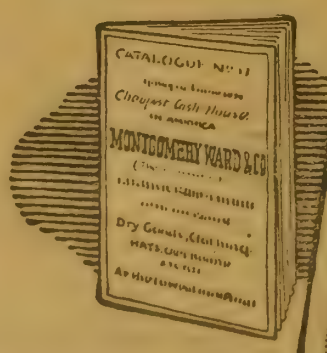
Cows from Polled Plato, herd headed by POLLED SUCCESS A 3rd. Young bulls and heifers for sale.

Smith Livestock Co.
CHIVINGTON, COLO.

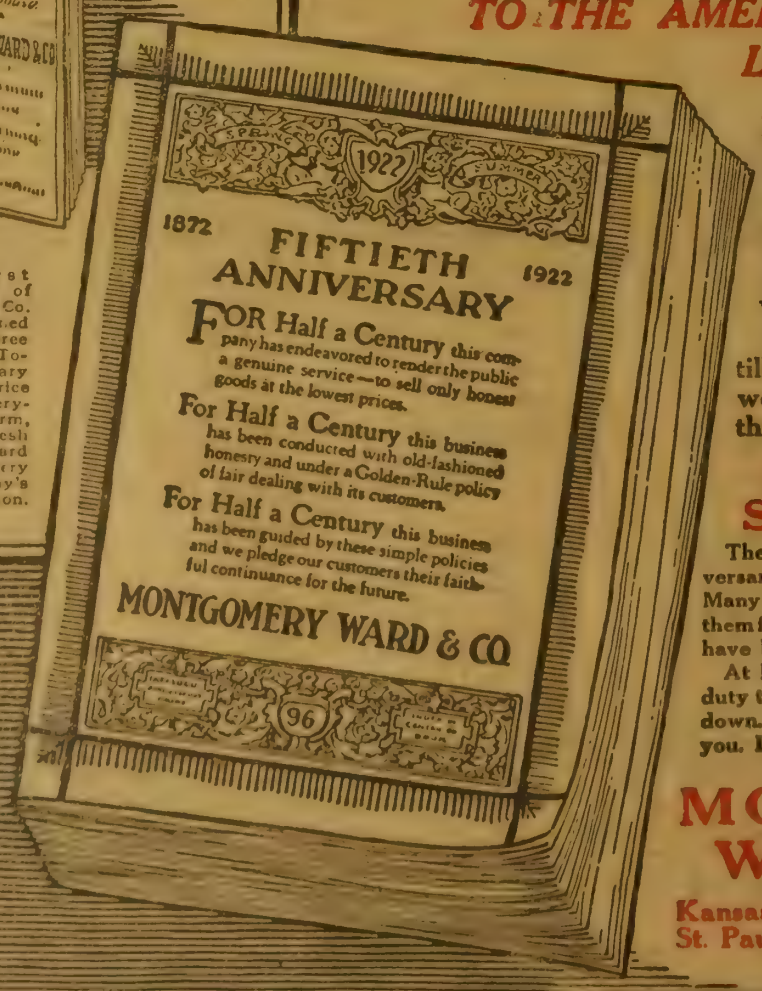
50th Anniversary Montgomery Ward & Co.

MONTGOMERY WARD AND GEORGE R. THORNE

started business under the name of: "Montgomery Ward & Co." in 1872. Mr. Ward had been a clerk in a small town store, with farmers as his customers, farmers as his friends. And so he conceived the idea of helping save the farmer from paying three or four profits by selling him goods direct by mail at one small profit. With a capital of less than $2,000 they issued their first little one-page leaflets, and so began this vast business of Montgomery Ward & Co.



In 1874 the first catalogue of Montgomery Ward & Co. was issued. It contained eight pages, about three by five inches in size. Today this 50th Anniversary Catalogue, this 1922 Price Guide, shows about everything for the Home, Farm, and Family — new, fresh merchandise of standard quality always, with every price based upon today's low costs of production.



If you have a copy of this book, buy from it regularly. It always brings you a saving.

And lend this book to your neighbors.

Let your neighbor take advantage of the cash saving it always offers.

The Oldest Mail Order House is Today the *Most Progressive*

FOR FIFTY YEARS the American Farmer and Montgomery Ward & Co. have been helping each other.

For Fifty Years we have worked conscientiously always to offer you a saving. And you, by your appreciation, by your patronage, have built this business, until today we have five million customers.

And there is the proof of the saving and the service Montgomery Ward & Co. have rendered to the public. No business that is not sound can weather the storms of fifty years. No business that does not render a genuine service can win the patronage of five million people.

Our big 50th Anniversary Catalogue, pictured below, adds greatly to the sum of all our past achievement in making low prices. This book is today a Price Guide, sets the low price standard for America, and tells you the right price, the price you should pay for almost everything you buy.

This book shows the new-old spirit of Ward's—progressive, alert, working to give lower prices, to give you bigger and bigger values, and better and still better service—and always under the Banner of the Golden Rule.

TO THE AMERICAN FARMER:
Let Us All Pull Together

We know business conditions on the Farms of America, as well as in the towns and cities. We have customers everywhere. We believe the worst is behind us and we are hopeful and encouraged. But we are all in the same boat. We must all pull together. We are going to do our part with you. This season you will need some new tillage tools to replace those that are worn out. We are going to furnish them without one cent of profit to us.

Our Tillage Tools Sold Without Profit

The prices on Tillage Tools in our 50th Anniversary Catalogue are absolutely no-profit-prices. Many items are priced at less than we can replace them for today. And the prices all through this book have been made to meet present-day conditions.

At Montgomery Ward & Co. we feel we owe a duty to our customers—to help make prices come down. We are in the same business boat with all of you. Let us all pull together. We are doing our part.

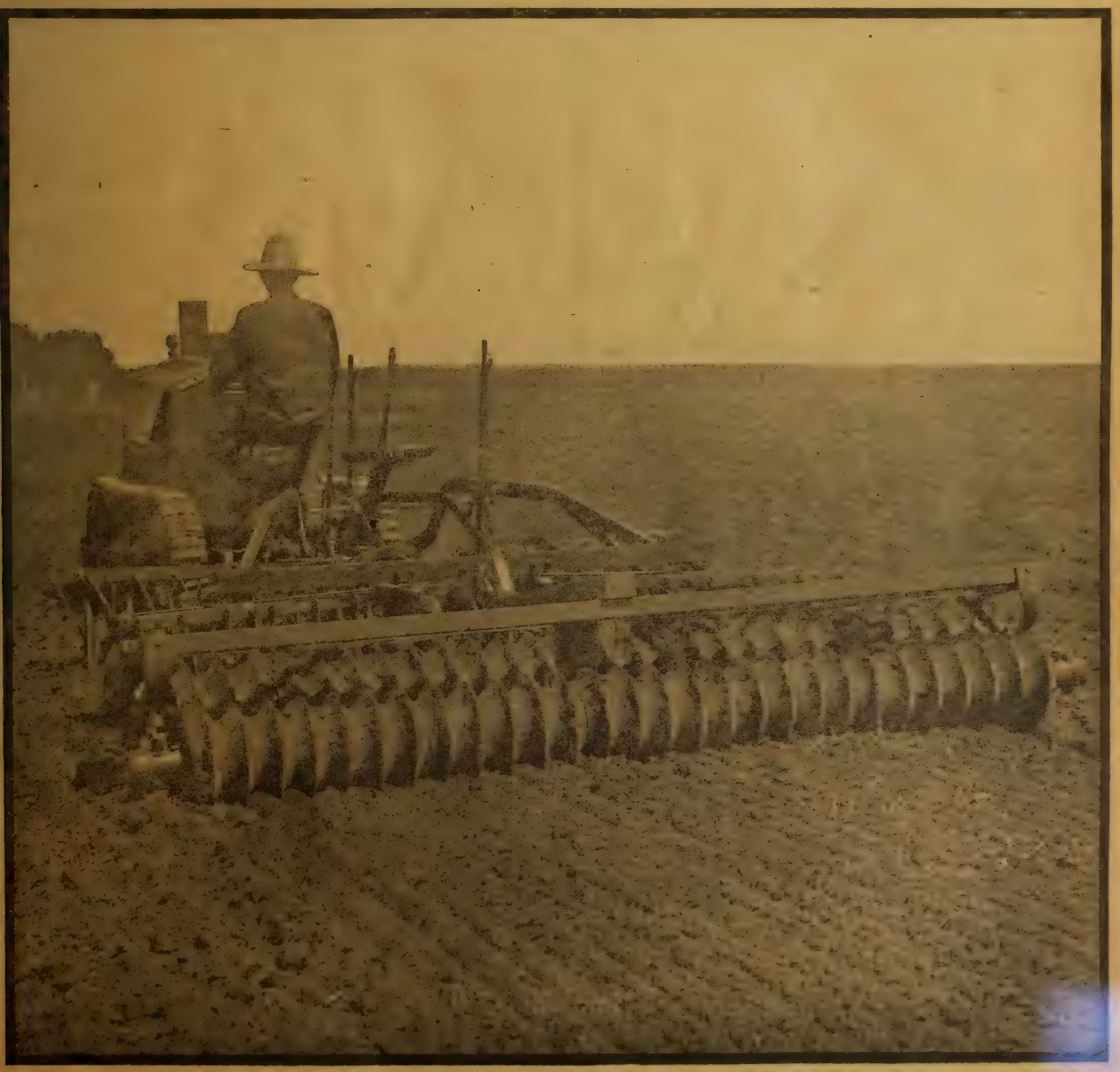
MONTGOMERY WARD & CO.

Kansas City Chicago Fort Worth
St. Paul Portland, Ore.

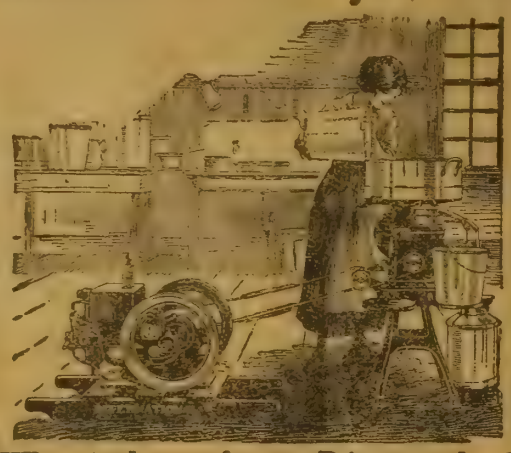
Why Not Grow Certified Seed Potatoes This Year?—Page 3

WESTERN Farm Life

Vol. XXIV. *Denver, Colorado, April 1, 1922.* *Semi-Monthly*



Primrose —
Builder of Dairy Profits



THE man who purchases a Primrose takes home to his dairy a product held in high esteem. He is fortified by the definite knowledge that it will go quietly to work for him in plain, practical, efficient fashion. He is comfortably certain that it will continue to conserve cream dollars for him, month after month for many years, in a degree excelled by no cream separator on earth.

Two factors convince the man of long-standing experience as to the wisdom of Primrose purchase. The prime factor of International Harvester quality manufacture, which has created International Harvester reputation, guarantees the worth of Primrose separators without more ado. The secondary factor lies in the popularity of the thousands of Primroses which have been placed in service in the nation's dairies during past years.

Cream separator investment is best made, and without long experimental delays or gambling with unknown values, by Primrose purchase.

Primrose Separators run easily and steadily, skim with exceeding closeness, and serve their owners reliably for many years. Direct power drive and electric motor drive equipment available. Built in four sizes with capacities ranging from 350 to 850 pounds of milk per hour. Sold by International Dealers.

INTERNATIONAL HARVESTER COMPANY
OF AMERICA (INCORPORATED)
CHICAGO U S A
92 Branch Houses and 15,000 Dealers in the United States

Why Join the Farm Bureau?

AFFORDS REAL OPPORTUNITY FOR EFFECTIVE AGRICULTURAL LEADERSHIP.

J. W. Coverdale,
Secretary American Farm Bureau Federation.

FEDERATION of the state farm bureaus of forty-six states, representing the united support of the most progressive farmers of 1,500 counties, gives the American Farm Bureau Federation a strength which has already been exercised most effectively in behalf of the great industry of agriculture.

The object of the farm bureau is to create a country-wide agricultural organization to advance and improve the agriculture of the country; to co-operate with the state college of agriculture and the United States Department of Agriculture in the employment of county agents; to develop a definite program of work that will bring to the county a better economic, social and educational condition so as to make farming more profitable and country life more attractive.

The farm bureau represents every community of the county by providing for a director from each township on its board of directors, and for a local group in every community—if one does not already exist—through which it can work.

The farm bureau represents all agricultural interests in that its officers include individuals engaged in all of the general and specialized lines of farming.

Encourages Community Co-Operation.

The farm bureau does not aim to replace any other organization as it includes among its membership representatives of all farmers' organizations. The farm bureau encourages community organization and co-operation.

The farm bureau is not a political organization, believing that more can be accomplished in safeguarding and promoting agricultural interests most vital to the welfare of the entire county, state, and nation by the united action of all concerned on measures of common interest, regardless of factional or political differences.

Solves Local Problems.

The county farm bureau will help you solve the problems of the county that stand for a better county and that you as an individual know should be solved. In unity there is strength, and the farm bureau will be as strong as the people who back it make it.

The state farm bureau federation is just an enlargement of the county unit to do the thing that the county as a county cannot do; where several counties or the entire state is affected it takes organization to do the job.

The American Farm Bureau Federation is no stronger than its component parts. It needs your help if it is to continue to function properly. It bases its program of action upon a thorough study of its problems, and has provided departments of administration, organization, finance, marketing, research, information, transportation, legislation and legal counsel, and has employed the best trained men that the country has to take charge of the work. It maintains a daily point of contact with the different research organizations of the country and with the state and federal agencies in studying agricultural conditions. It holds conferences with organizations of all kinds in order that it may study their problems and at the same time present to them the true situation of agriculture.

The farm bureau carefully prepares on every subject before speaking—thus it has the confidence and respect of the public, in that it is fair in all its dealings and is not advocating for the farmers anything but an equal opportunity to carry on agricultural pursuits on a par with other industry.

Reasons for Joining.

The farm bureau affords membership in a large and strong strictly farmer-controlled organization in your county.

It offers membership in a state federation of the county farm bureaus constantly increasing in influence and power for good to the agriculture of your commonwealth.

It affords membership in the national association of the federated bureaus of the states and thereby gives you a voice in formulating America's agricultural policy and in winning for the farmer economic and social justice.

Membership is afforded in non-political and non-sectarian associations which have for their prime and only purpose the organization of the farmers of the United States for the advancement of the farming business through a constructive program with reference to existing associated businesses and organizations which are necessary and lawful. Its aim is to make the business of farming better and surer, free from uncertain and unsteady markets, with selling prices based on a profitable cost of production.

It affords real opportunity for effective agricultural leadership. It gives each member a functioning place in a vast movement conceived for the benefit of America and for the improvement of life in the open country.

It stands for orderly marketing through community associations.

It stands for constructive legislation. The results of that stand can best be determined by studying its record at Washington.

It stands for lower transportation rates, in proper relationship to the prices of farm products.

It stands for the education of the nation in regard to the farmer's problems.

It stands for a square deal for all.

JOIN, if you are a farmer, because the farm bureau needs you and you need the farm bureau.

It will cost approximately $16 to produce a litter of pigs this spring. If two are saved, there is a debt of $8 on each pig the minutes it is farrowed. If eight are saved, this debt is reduced.

SEVEN CALVES SAVED BY GERM-A-TONE

GERM-A-TONE—THE CALF SAVER
TO PREVENT ABORTION IN COWS

NO PILLS, TABLETS, VACCINATION OR INJECTION

Just mix one pound of GERM-A-TONE with fifty pounds of salt and put the mixture out in a box or trough where all cattle can have free access to it—that's all.

PROTECT ALL STOCK AT THE SAME TIME

cows, calves, bulls, horses and sheep. GERM-A-TONE is an antiseptic germicide, pleasant to the taste of cattle. They leave all other salt and go a long distance to get GERM-A-TONE.

TRIAL PACKAGE, $5.00 POSTPAID, ANYWHERE

Enough to mix with 200 pounds of salt. With GERM-A-TONE in your salt boxes you will be insured against abortion for less than 25 cents per year a head. **Send for a trial package today.** We guarantee satisfactory results or your money back. We take the risk. Not a case of failure reported. Mailed to any address in plain wrapper on receipt of price.

THE GERMICIDE COMPANY DENVER, COLORADO

EGGS AND POULTRY SOLD AT GOOD PROFITS.

Through a little Classified ad in our Farmers' Exchange, surplus eggs and poultry can be sold at a good profit. Others are making money through our Classified Columns, so can you. To get letters about your poultry of good sales made.

S. L. L. Larson, Ft. Morgan, Colo., writes: "I received my ad. Your ads are sure getters."

You too will get profitable results if you use it as a real advertisement. See page 10 for rates, etc.

WESTERN FARM LIFE,
Denver, Colorado.

GET FULL VALUE FOR
YOUR FURS

WHILE PRICES ARE DOWN have them tanned and made up into rugs, robes, coats, scarfs, muffs and other useful things for the home or family. Prices always reasonable. Furs and skins accepted in payment for work. Write for free price list to

HARRY AMANN,
FURRIER TANNER TAXIDERMIST
938 14th St., Denver, Colorado
Established in 1910.

High Spots in Co-Operative Marketing Program.

A Co-operative marketing association must be composed of farmers, exclusively, and managed by them, the benefits being returned to them in proportion to the use they make of its facilities.

Capital necessary to create the agency and its facilities should preferably be contributed by members in proportion to the use each makes of the organization. Capital in a co-operative agency must not receive a dividend in excess of a fair rate of interest.

Voting powers in a co-operative association should be based on the one-man-one-vote principle. Capital as such must have no voting power. There must be recognition of equality of membership as evidence of mutual confidence.

Contracts between members and the association give organization stability and have a steadying influence on members who may not be used to working with others and likely to be led astray by outside disrupting influences. No contract, however, can hold farmers together against their will.

No farmers' organization is likely to succeed unless its members develop a living, breathing spirit of mutual effort. **"The basis of the co-operative organization is men. Capital cannot co-operate; products cannot co-operate—only men can co-operate."**—G. Harold Powell.

Western Farm Life

A Western Magazine for Western Farmers and Stockmen

VOL. XXIV. DENVER, COLORADO, APRIL 1, 1922. No. 7.

Why Not Grow Certified Seed Potatoes This Year?

FIELD SELECTION ONLY METHOD BRINGING IMPROVEMENT IN CROP

By George C. Wheeler.

YOU would not expect to improve your livestock or produce high quality animals if you sold all the best and kept the culls for breeding purposes. And yet selecting for seed screenings from the potatoes graded for market is a practice too commonly followed by potato growers. By this method the tubers passing through a two-inch mesh are the ones which serve to propagate the plants for the next year's crop. It is nothing more nor less than planting culls and most certainly no improvement in type or quality could be expected from this method of selecting seed stock. It is a most undesirable means of obtaining seed and should not be practiced except in times of great shortage.

Nature, if left to herself would never have produced the potato as we have it today. It has taken the most painstaking care on the part of man to produce the various types and varieties of potatoes which are such an important factor in Colorado agriculture. Highly developed types of specialized crops brought to their present stage of excellence cannot be prevented from retrograding and going back to their remote ancestry without constant care in the selection of seed stock, let alone bringing about any further improvement. No potato grower should be without his seed patch if he would keep his crop from degenerating in quality and type. If unable to grow his own seed he should by all means plant nothing but certified seed. It pays even though the certified seed costs double the price of common seed stock.

Select Seed in Field.

In producing real seed potatoes hill selection is the method most highly recommended. It is not the most popular method of getting potatoes to plant for seed, because it involves too much painstaking work. It is the method, however, which commends itself to anyone who will give the matter any thought. The actual work is performed in the field as the plants grow and develop. Each plant can be observed as an individual just as individual animals can be observed and their performance recorded. Undesirable plants can be culled out. These will include diseased plants and degenerate types. They will be given no opportunity to reproduce themselves or infect the commercial crop with disease. With all its advantages not to exceed 5 per cent of our potato growers have seed plots according to the officials having charge of certification of seed in Colorado.

Selecting seed in the bin is a much better method than that of using the culls, but this method is practiced by comparatively few growers. It also is unpopular because it involves extra work. In bin selection the grower picks from his bins during the winter and early spring months tubers of good type and free from diseases and uses them for his seed. In this method there is no opportunity to observe anything as to the character of the plant from which the tuber came or the yield it made. It might even have come from a diseased plant. Many low-yielding plants produce smooth true-to-type tubers and these will reproduce the character of unproductiveness with as much certainty as the character of good type individual tubers. This method, while better than using screenings, does not commend itself to a grower who really wants to make progress and maintain a high standard in his general crop.

Good Seed Potatoes Scarce.

Seed potatoes worthy of the name are scarce and hard to obtain. Certified seed potatoes and common stock are being shipped into Colorado by the carload from northern states. Better seed potatoes produced by methods such as can be carried out by a careful man with an ambition to grow superior seed stock carrying the inheritance which will bring high yields of tubers of the type demanded by market requirements can be grown in many places in Colorado. Potato growers generally could with profit do the necessary extra work required to handle a seed plot and solve this seed potato question in so far as their own requirements are concerned.

In addressing the farmers of the San Luis valley recently Lou Sweet, the well-known potato expert of Colorado, urged the importance of not only using unusual care in selecting seed, but in treating it with corrosive sublimate and fumigating potato cellars. He advocated the seed patch and pointed out that up to this time farmers of that section had been unusually free from potato diseases. He told them that conditions existing in many potato localities were inexcusable.

Mr. Sweet, who is generally known as a potato grower, said that only about one-fourth of his acreage is in potatoes each year, the remainder going through a rotation process including grain and alfalfa.

Last year 100 acres of certified seed potatoes were grown in the San Luis valley, and an effort is being made to double it this year. In that section and in others, inquiries for certified seed are coming from other states, which suggests the possibilities of growing certified seed as a business and getting the premium which will be paid as a recompense for the extra labor and exercise of gray matter which this type of work demands.

If you do not have a seed patch and must get your seed as best you can for this spring planting, selection from the bin is the method to recommend. Begin sorting over the potatoes, picking smooth, true-to-type tubers for planting. Discard pointed tubers and those which are rough, knobby, or bruised. Potatoes showing any signs of dry rot should be discarded. Select the seed in close conformity to the type being grown. Every variety has its ideal type. The department of horticulture at Colorado Agricultural college has charge of the certification of seed potatoes in the state and those whose stock has deteriorated badly would do well to get in touch with Dr. E. P. Sandsten and ask for assistance in locating desirable seed and for suggestions on the general problem of potato improvement.

Job for a Specialist.

Production of certified seed offers an opportunity for profit to careful farmers who are willing to follow instructions and make the painstaking effort to keep the crop up to the required standards. Certified seed should be grown at high altitudes and the most careful methods must be followed. It is a job for a specialist and some of the most careful men may have their crops turned down occasionally. The principal certified areas in Colorado are the Estes park, the Divide, San Luis valley, the Eagle river country and the Montrose section. The northwest counties should have areas adapted to growing certified seed.

Two ex-service men, George Spangler and his partner, Heinberger, have demonstrated the kind of push and energy it takes to get into the seed production business. They are located west of Tennessee Pass at an altitude of 7,000 feet. In 1921 they grew a seed patch of sixteen acres of Russet Burbanks. The year before they made their start by clearing a four-acre patch which they planted with the choicest seed. They now have cleared forty acres of sagebrush land which will be planted with their most carefully field-selected seed this year. Last year they missed certification by a narrow margin, but were not discouraged.

Recognize Market Demands.

Recognition of the market demands is a matter of prime importance in the growing of seed potatoes. No one may be able to explain why certain types of potatoes are in demand, but the fact remains and the seed grower must produce the type the market calls for. In the Greeley commercial potato district Rural New Yorkers and White Pearls are standard; in the San Luis valley Russet Burbanks, Red McClure and Brown Beauty; in the Eagle district Russet Burbank; Carbondale, Russet Burbank and People's Russet. These are all late varieties. The Irish Cobbler is the commercial standard for an early potato to follow the Early Ohios from the Kaw valley. All these varieties can be grown on the Divide or in the other certified seed potato areas.

The irrigated potato sections of Colorado are not the only outlets for certified seed. The southern market requires a thousand or more cars of seed potatoes every year, and the Colorado seed grown on the dry land meets their requirements even better than the seed they are buying from Minnesota, Wisconsin, New York and Maine. The Bliss Triumph is the standard variety for this trade. They also produce Irish Cobbler. These two varieties are the only ones demanded by the Southern trade. Practically all the southern growers get their seed from the North.

How Seed Is Certified.

Application for certification must be made before June 1 of the year in which certification is desired, addressing State Horticulturist, Fort Collins, Colo. If uncertified seed is to be planted it is a good plan to make application early enough to permit an inspector or the county agent to see the seed before planting. The blank form supplied must be properly filled out and returned and after it has been accepted the field is registered for certification. All seed should be treated before cutting with a solution of mercuric chloride, prepared by dissolving four ounces of the chloride in thirty gallons of water. Soak one and a half hours, renewing the solution after using three times. Use wooden containers.

An inspection is made of the plants in the field just before they mature to determine trueness to type and variety, freedom from disease, stand, and general vigor. At digging time another inspection usually is made, this second inspection being optional with the inspector. The final inspection is after the crop is harvested and graded for market. To summarize: The grower desiring certification after planting clean seed on clean ground should get his field registered; notify inspector two weeks before tops die; rogue out undesirable plants after field inspection; dig, store, and grade seed carefully, and if the crop passes, get the certificates and tags required. He must fill out all blank forms sent and if his stock is not sold may have it listed by the state office in the certified seed bulletin.

Nearly two hundred growers requested inspection of their fields in 1920, the first (Turn to Page 22)

Market Outlook for Farm and Ranch Products

DESPITE THE BRIEF DECLINE IN PRICES, GENERAL OUTLOOK IS GOOD

Edited by Glenn G. Hayes.

FAILURE of prices on some farm products to maintain topmost levels is disappointing, but progress seldom continues long in one direction without temporary interruption. Hogs and lambs were about as high as they could be expected to go and it is still too early for any dearth of wheat to exert its full effect on quotations. But even $10 hogs mean prosperity in the cornbelt if costs are down and in spite of recent declines, the entire agricultural price level is substantially higher than in December.

The general average of commodity prices has become relatively stable with a slight upward trend. Dun's index number advanced nearly 7 per cent from July 1 to March 1, and Bradstreet's index, considered the most accurate forecaster of forthcoming changes in business conditions, has advanced 8 per cent from its low point last June.

Employment by manufacturers is on the increase, the March 1 total as reported by the Department of Labor being slightly larger than on February 1. The iron and steel industries are operating at a rate about one-third larger than the average of last year. A number of auto companies report larger sales than a year ago. The building outlook is still very promising.

Car loadings, which usually decrease from December until this season of the year, have shown a rather steady increase in this period and are now larger than at this time last year or three years ago, indicating that a larger quantity of merchandise is moving through trade channels.

Bank clearings, which measure the purchasing activity of the nation as a whole, have increased until they are larger than at this time last year, the first time that this comparison has held good in a year and a half.

Prices of stocks and bonds have advanced rather steadily since midsummer and stocks are nearly 25 per cent higher than at that time, thus furnishing an index of rising optimism in the future of industrial affairs and an increased supply of funds for investment.

Reserve ratios of banks have ceased to increase, indicating that the demand for money at current rates is growing and that business expansion has begun.

Foreign countries still have their troubles and exchange rates have passed through a sharp setback from which they are now recovering. There is little fear of a collapse among European nations and more evidence of a return to sanity in handling their financial affairs.

The coal strike threat is the bogey at the present time and opinions are widely at variance as to the danger from this source, but those who have been in close touch with the situation view it rather hopefully.

There is nothing resembling a boom on the horizon, but analysis of all the factors leads inevitably to the conclusion that a period of moderate expansion commonly known as "prosperity" is on the way.

Cattle Market in Setback.

The cattle market developed another case of indigestion last week when a moderate increase in supply appeared. The run at seven markets was the largest since the middle of January. About half of the gain in values during the last two months was lost, all classes participating in the retreat.

With the tax assessment date on the horizon, feed lots muddy, spring seeding operations about to begin and the fact that many cattle are nearly finished and show a profit on the outcome, the increased run was not especially surprising. A similar occurrence is not all uncommon at this season of the year.

Dressed beef prices declined 50 cents to $1 in eastern cities. Lent is a factor and the prospect of a larger supply pursuaded buyers to back away. Some cattle from eastern feedlots began to move, reducing shipper competition in the Middle West and increasing the tonnage of beef. The general undertone of the market is healthy, however, and as soon as the supply shrinks again the upward trend of prices should be resumed.

Exporters are buying more freely and took around 2,500 head at Chicago in the last two weeks.

A few prime yearlings are showing up and are selling at the top. Many half fat yearlings also are for sale, but these must compete with cheap light beef from other sources and such premature sales are disappointing.

Stockers and Feeders Cheaper.

Stocker and feeder shipments have held consistently to about 50,000 head a week for some time, but when the fat cattle market weakened buying received a check and prices declined slightly, affording an opportunity for bargain hunters. Present signs are that all the thin cattle available will be wanted this year and there may not be enough to go around. Rains have greatly improved the pasture prospects in the big areas of Kansas and Oklahoma, but little cattle trading has been done, operators balking at asking prices for both cattle and grass. Yearlings are priced as low as $27.50 in Texas, with 4-year-old steers, of which there are precious few, up to $60. The Northwest needs a lot of cattle, but lacks the money to buy and the courage to risk the outcome a year and a half hence.

Hog Market Takes Drop.

Hog values ran into the first sharp break since late December during the last week, in which about $1 was lost. The market was topheavy and a moderate decline in demand for fresh pork, together with an increased supply due to heavier weights rather than a larger run, precipitated the break. The demand for fresh pork was oversupplied in the East, so that eastern shippers also bought less freely and left more of the price making function in the hands of big packers, whose orders always are to "buy them cheaper."

Pork consumption is not expected to fall off a great deal, although the higher level of prices probably was a factor in checking it to some extent. Weekly clearances of lard and meats for export are to apply on old sales, but there is a general belief that when old sales are filled, new ones will be made so that clearances will continue. Packers still are unable to accumulate much product as shown by the mid-monthly report on stocks in storage and with the usual decrease in hog receipts during oats and corn seeding time they are not likely to pile up a heavy supply, although there may be some increase until the end of June.

Lamb Market at Top.

That lamb prices have passed the high point of the season is the prevalent opinion in the trade. The market has not declined much, but quotations are slightly lower than a week ago, although mature sheep have gone in the other direction and were around 50 cents higher at Chicago. The supply in sight for the next month is a light one and no great change in prices is expected. If the market holds steady it will be performing well. Warmer weather affects the demand for lamb and mutton, and California will begin to market her crop of January lambs before the movement from feed lots has entirely ceased. Heavy lambs are beginning to sell at a wider discount and the spread between shorn lambs and those still in the fleece is growing narrower.

Sentiment in the sheep industry is again enthusiastic and Colorado feeders are already contracting lambs for fall delivery at $11, which is twice as high as the initial prices last fall, when the movement began.

Wheat Demand Revives.

Conditions which caused the decline in wheat prices during the last two and one-half weeks were largely temporary. With liberal quantities arriving in Europe and large amounts on passage for European ports, some of it still unsold, European buyers took advantage of the situation and dropped out of the market and made an involuntary bargain day for their own benefit. A sharp decline in foreign exchange rates also was a factor.

Aside from the improvement in the winter wheat crop in the Southwest as a result of generous rains in that section, the situation shows no material change. Europe must have a lot of wheat before next harvest and will not be able to keep her needs concealed.

Stocks in store in the United Kingdom on March 1 were unusually low, and even though (Turn to Page 20)

Trees and Shrubs Adapted to Southeast Colorado

EXPERIENCE OF TWENTY YEARS BASIS OF RECOMMENDATIONS MADE

Burton Smith.

AN experience of twenty years in tree planting in southeast Colorado and southwestern Kansas has convinced me that trees and shrubs adapted to the conditions can be successfully grown by one who will profit from what others have learned.

For shade trees in order of endurance against dry weather and wind I would recommend the black locust, honey locust thornless preferred—hackberry, white ash and American elm. For permanent endurance the honey locust outclasses them all. It grows a little slower the first two years, but often will be living when other trees have perished. I have not overlooked the cottonwoods and poplars, for they serve a purpose here, but the borers eventually get them and there will be a vacancy where a permanent tree was desired.

Hardy Vines and Flowers.

Having trees we also want shrubs, flowering plants and hardy vines. We can take our cue from Nature. Have you ever noticed that the wild flowers of the west bloom early and then the tops ripen and they remain dormant during the hot summer? Choose the cultivated flowers which do the same, as peonies, iris, early blooming lilies, early flowering bulbs—tulips, hyacinths and others. For annual flowering plants try [illegible], cosmos—early blooming—and marigold. If you have water and will give them the proper care, plant sweet peas, asters, nasturtiums, "mourning [illegible]," California poppy and snap dra-

[illegible] the perennial climbing vines the [illegible] creeper, woodbine, Japanese [illegible] vine and honeysuckles will succeed, and of the annual Japenese hop, climbing nasturtium and scarlet runner bean. For ornamental shrubs or windbreaks use common hardy lilacs, flowering quince, flowering almond, bridal wreath—Spirea Prunifolia—and last but not least, two varieties of tamarisk which are very hardy.

Tamarisk Most Hardy Shrub.

These tamarisk varieties both grow readily from cuttings, and can be trained to any style of hedge, or grown to a dense screen up to fifteen or twenty feet in height. Were I confined to but one plant for ornamental and windbreak purposes, it would be the tamarisk Amurensis and Japonica, two varieties that for five years have withstood temperature as low as 36 degrees below zero and all manner of winds and dry weather here in Kiowa county, Colo. In my experience the Amurensis variety has been best for hedging purposes, easily trimmed and kept as wanted, blooming early in the spring, and again through the summer, but the blooms are not very showy. The Japonica variety produces racemes of pussy willow-like blossoms early in the spring, to be followed at two or more times through the summer with its eight- to fourteen-inch lengths of bright rosy-like pink flowers remaining in bloom two weeks or longer each time. It grows more upright than the Amurensis and is very desirable for windbreaks and large, dense screens.

The foliage of these two varieties of tamarisk is a light shade of green, very much the color of sagebrush or the Colorado blue spruce. These varieties as well as the other two to be described, have fine dense feathery foliage, nearly like that of asparagus. The tamarisk usually grown has the bad fault of winterkilling to the ground in this locality about every other year, as also does the Tamarix Odessana. Both have dark green feathery foliage, the latter the more feathery. The Odessana is a little more hardy than the Africana, and fifty miles south of this point would probably withstand the winters, and if so, would be the most beautiful of the four varieties for hedge purposes. All varieties of tamarisk become "scragly" unless the prominent limbs are trimmed back. The variety usually catalogued by the nurseries, the Africana, is the inferior one for us, while none of them seem to have the Japonica.

Many Evergreens Hardy.

The evergreens for us are those growing the nearest to us to the west, the cedar, pine and spruce. Any one having seen these trees growing in the barren places and in the buffalo sod on the southerly exposed slopes, should believe that the same trees can be readily grown under cultural methods, and it is the belief of the writer that we are at fault if we do not surround our homes with these valuable trees. In my opinion the Platte River Red Cedar sold in Nebraska is a more robust, faster growing and more symmetrical tree than the one growing wild near us.

The Chinese arborvitae, recommended by Colorado and Kansas nurseries as being both hardy and drouth resistant, is a beautiful tree, but can not be successfully grown here for the simple reason that it pushes forth its leaves at the first approach of warm weather, almost before the frost is out of the ground, and grows as much as six or eight inches, to be caught by our almost certain spring freezes. This kills back almost all of its previous year's growth and it becomes a poorer tree each succeeding year.

Trees Cannot Compete With Weeds.

The Russian thistle sends out its roots six or more feet on every side and a plowed strip a rod wide with thistles growing at its edges, will have but little space in the middle unaffected by these thistle roots. It is impossible to grow trees or plants in narrow plowed strips with weeds on either side, much less with weeds growing among the trees. We have a very nice soil, mostly a "sandy loam" when kept pulverized, but let it dry in a hardened condition and you have a subsoil resembling a scythe stone, in which no tree without a well established root system can survive. Cultivate often and mulch trees if possible. There is nothing much better than soap weed for mulching.

With careful planting and especial care the first year, we may have gooseberries, plums, Keifer pears, blackberries, strawberries, wild currants, apples, grapes and in heavy soils cherries.

None of these good things, however, can be had and maintained except by constant and careful attention.

Essential Principles of Co-Operative Marketing

WILL TO WORK TOGETHER NECESSARY IN FARMERS' ORGANIZATIONS

G. Harold Powell,
Before Agricultural Conference.

CO-OPERATION among farmers is an enterprise in which the members form an agency through which they conduct the business for their greatest mutual advantage. To be co-operative it must be composed of farmers, exclusively, and managed by them, and the benefits must be returned to them in proportion to the use or the patronage of each. That part of the capital necessary to create the agency and its facilities, which finds an expression in the management of the association through the voting of the members, should preferably be contributed by them in proportion to the use which each makes of the organization. Capital in a co-operative agency must not be a fund on which a dividend is paid in excess of a fair rate of interest for its use. Working capital may, of course, be provided in other customary ways.

Will to Co-Operate Essential.

A form of organization may be easily adopted, and business management may be provided; but the will to co-operate develops slowly in the farmer's consciousness, out of his efforts toward actual co-operation. Therefore, any co-operative marketing organization that is quickly formed needs most careful watching because the average farmer is not skilled in the arts of competitive business; he is slow to delegate authority to any one and reluctant to yield any part of his individual freedom by modifying his own actions to meet his neighbors' needs.

In forming a co-operative marketing association, it is fundamental that it be a proper legal entity, with sufficient authority to transact the business for which it is formed, to finance its activities, and, when necessary, to secure its obligations—thus, equally with other corporations, safeguarding the interests of its members, as well as of the banks with which it transacts business.

Membership in a co-operative association should be confined exclusively to producers who actually use its facilities. Those who contribute capital only should never be admitted to membership, because it is not desirable that it be furnished by non-producing business interests which would thereby acquire a power in the association and a voice in its direction. Membership in a co-operative organization carries with it a responsibility on the part of each member to maintain it in periods of adversity—a responsibility which is not likely to be felt unless the organization is the farmer's own institution, developed and managed by him through his chosen representatives, to promote and safeguard his own interests.

The voting power in a co-operative association should be based on the "one-man-one-vote" principle. This principle of voting, however, should not be made a test of the legal co-operative character of an organization. A recognition of the equality of membership is the best evidence of mutual confidence, because, in the final analysis, it is the members who, as men, co-operate and their success depends on their belief in each other and on their fairness in dealing with their common business problems.

Membership Contracts Strong Feature.

A co-operative association must be held together through an agreement or contract between the organization and each member. A contract gives the organization a stability that enables it to know definitely what it is expected to do, to enter into dependable business relationships and to make the necessary financial or other preparations essential to the conduct of its affairs. A membership agreement is a steadying influence on each member who may not be accustomed to working with others and who may be led astray by outside disrupting influences; nevertheless no contract can hold a group of farmers together against their will.

A membership agreement should extend over a long period of years, if provision is made that any dissatisfied member may withdraw at some specified time. The long-term contract adds greater stability to the organization as an institution of business, while the withdrawal privilege, when reasonably safeguarded, removes the dangers that are inherent in willing co-operation.

The ultimate success of a co-operative organization will depend not only upon the development of a spirit of co-operation within the membership, but also, on a willingness to co-operate with the agencies with which it has business relations. No farmers' organization can eventually live that is managed arbitrarily; it is likely to succeed only as the members develop a living, breathing spirit of mutual effort; and this vital, living spirit must also be manifested in its board of directors and in those who are responsible for its management. The co-operative movement does not represent a business systm alone though it must, of course, develop the highest form of business efficiency to justify its continuance. It involves, also, a very intimate, human quality whose roots are deeply implanted in the social nature of man, and whose expression leads them to work willingly and unselfishly together.

Because a co-operative marketing organization represents inherent power—and the larger the organization, the greater its power—its danger lies in becoming involved in political affairs and in movements which, though worthy in themselves, have nothing to do with its primary purposes and can only lead to a divided membership and factional control, with ultimate disruption.

Single Commodity Organizations Strongest.

The strongest organizations are those which specialize in handling a single crop, such as citrus fruits, raisins, walnuts, prunes, peaches, etc.; and, when this specialized organization is adopted, it develops the greatest dependability if founded by small groups of growers who are neighbors, who have confidence in one another, who belong to the same churches, schools, or other neighborhood institutions, and who federate these local units into a central marketing agency. These neighbors form local associations, provide packing houses, warehouses, and other permanent facilities through the investment of their own capital; they take part in local management, and are an intimate, personal part of their own institutions and their activities. These local units are centers of vital influence for good in a community.

In the California Fruit Growers' Exchange, for example, through which 10,500 members sell nearly one hundred million dollars' worth of citrus fruits annually, to the wholesale trade, the growers have formed more than two hundred local associations, each owning its own packing house and managing its local affairs. For business efficiency, these associations federate into a central agency through which they provide the facilities for the sale of their fruit.

The decentralized form of organization may not always be adapted to a seasonally-produced, non-perishable or semi-perishable crop that requires warehousing, or needs to be prepared for distribution in a central plant and finances provided for stronger distribution and sale. In such industries as these, a larger centralized marketing or warehousing unit may be a more adaptable business form. But those who are responsible for its direction should never lose sight of the need to develop a local participation and some degree of responsibility in the affairs of the organization.

Need More Marketing Knowledge.

The producers and the public generally need more knowledge of the financing, assembling, distributing and selling the nation's farm crops. A large part of the endless conflict between the producer and the distributing agencies, extending to the consumers as well, is the result of a lack of dependable information regarding the cost of production and of distribution. Until an industry has clearly analyzed its problems and has an accurate knowledge of the complicated financing and distributing processes, no graver mistake can be made than to assume that a remedy for its marketing difficulties lies in the elimination of one or more of the agencies of distribution. These agencies are closely interwoven with the necessary financing and distributing machinery and have generally grown out of a vital need in distribution. Only after a farmers' organization has proven that it can perform the same service more efficiently or more economically, should it decide to eliminate any of the present links in the closely interwoven chain of distribution.

Farmer Must Have Fair Return.

A co-operative organization has a distinct responsibility to the public. It cannot live for itself alone. Through the co-operative handling of farm crops the farmer should receive a fair return for his crops, but such co-operation should be an important factor in reducing the general cost of living through the economies that result from the organized preparation, distribution and sale of standardized products. The producer is entitled to a fair return on the cost of production, provided the law of supply and demand warrants it, but he is not privileged through the power of organization to impose a higher price on the consumer than the law of supply and demand naturally justifies. As an outstanding factor in the permanency of an agricultural policy, the farmer must, of necessity over a series of years, receive for his crops a price in excess of the cost of production. The co-operative marketing system is the most important factor in insuring a fair price to the farmer. But if the law of supply and demand does not return the producer a profitable price for his crops there must be eventually a natural automatic reduction of the supply in adjustment to the demand of the consumer.

A Successful Co-Operative Business

FARMERS LEARN TO WORK FOR MUTUAL INTERESTS.

WE learn to co-operate by co-operating, beginning with the local business organizations and other mutual interests, working on into wider fields of co-operative effort. One of the educative influences in co-operation among farmers has been the constructive work of the Farmers' Educational and Co-Operative Union, commonly spoken of as the Farmers' Union. There are now in Colorado more than 150 local business associations which owe their existence to the educational influence and active work of the Farmers' Union. Among these and one of the strongest is the Farmers' Co-Operative Mercantile Association of Fort Morgan.

After visiting among the farmers of this progressive community and attending one of the business and program sessions of the "Local," one can see why this strong and well managed business organization has been created and brought to its present standing in the community. As G. Harold Powell has well said, "Only men can co-operate." The human element must enter in and become a vital part of the organization. This seems to have been done in this community.

The Fort Morgan local was organized in 1915 with about twenty charter members. At the last state convention of the Farmers' Union this local was said to have submitted one of the best reports offered at the convention, setting forth as it did the many lines of constructive activity which had been carried out to successful conclusions. The year following the chartering of the local, the mercantile association was started. It now has a membership of approximately one hundred and in 1920 the total volume of business amounted to $99,800. In the fiscal year 1920 and 1921 the wheat handled amounted to more than a million and a half bushels. The present year to date almost nine million pounds of coal have been handled. Some corn is shipped, but more corn has been shipped in than out for this is a feeding center and does not produce enough grain for feeding.

No stockholder is allowed to own in excess of $750 in stock. The interest on capital is limited to 8 per cent. In some years substantial patronage dividends have been distributed to members. Lack of sufficient operating capital has been a handicap in this as in many co-operative business associations. The management sees the necessity of building up a reserve to carry the business through periods of depression.

At the present time too much interest is being paid on borrowed money. The business will eventually get to the point where it will be financed more largely from within.

This business has a well equipped plant, including two elevator buildings with cleaning machinery, barley rolls and grinding machinery, bean cleaners and storage for beans. The total capacity of the plant is 35,000 bushels. It is valued at $40,000 and is capitalized at $50,000.

This institution has been a distinct advantage to the community. In response to an inquiry as to the effect on prices of having farmer competition, the manager, B. H. McConnell, replied that it had compelled other institutions to watch the corners more closely and bid up if they expected to do business, in other words, it had created better markets for grain at all buying points within hauling distance. It is not necessary for a farmers' co-operative to handle all the grain shipped to be of distinct advantage to the community. This point sometimes is overlooked when the co-operative has been up against difficult marketing conditions and has been unable to pay liberal patronage dividends and meet its stock dividends in full.

C. M. Snodgrass is president of this co-operative business organization and Willard Reed secretary. There are seven directors. At the recent business meeting action was taken which will strengthen the institution and promote its stability. The cut shows the buildings, which are located on the Burlington tracks.

Fort Morgan Co-Operative Mercantile Association has modern equipment for handling its business.

Good Garden Saves Money and Keeps Doctor Away

VEGETABLES AND FRUIT CAN BE ADVANTAGEOUSLY GROWN ON EVERY FARM

PRODUCTION of vegetables for home use is the main purpose of the farm garden. A good garden is a distinctly money-saving proposition. Not only does it keep the table supplied with a variety of food during the production season, but surplus vegetables may be dried, canned or stored in other ways, and provide a supply of vegetables for the table the year round.

Anyone should be able to have a good garden with plenty of water, but the dry-farm garden requires considerable head work. The principle upon which success with the dry-farm garden depends is to concentrate precipitation from adjoining surfaces to a restricted area upon which the plants grow. As Parsons points out, we have all noticed how little beds of flowers around the house getting the drip from the roof grow and thrive. They are simply getting more than their share of the precipitation—more than they would get in the open field. This is the principle to apply in the dry-land garden, for what does a little extra land amount to in so important a matter as having a good garden, and especially when we know all the water falling on this extra land goes directly to the roots of the plants.

Water for Dry-Farm Garden.

Mr. Parsons advises plowing deep for the garden in strips five feet wide, leaving a dead furrow every five feet with a ridge or back-furrow between the dead furrows, in other words, alternate ridges and hollows. The vegetables are to be grown in the hollows and get the water falling on the ridges, about three times as much as they would get if planted on a level plot. He advises giving the hollows an extra plowing to allow plenty of depth for the rooting of the crop. Leaf mold or well rotted barnyard manure should be mixed with the soil in the furrows. Next to leaf mold nothing is better than old cattle or sheep corral humus. Haul several loads of this material into the furrows before giving the extra plowing. This may seem like a lot of extra work, but it will pay, for peas, beans, cabbages, carrots, turnips, beets, and asparagus will respond wonderfully to this fertilization for several years.

The garden should be located on deep rich soil, but where there is no choice have it as near the house as possible. It often pays to carry water from a well for garden crops, but this should not be done early in the season, for it encourages the plants to root near the surface and when the hot weather comes they wilt. If plants are to be watered at all, says Parsons, do it only as a last resort and near maturing time. For watering melons, squashes, and cucumbers and even tomatoes, cans with holes punched in the bottoms can be sunk in the ground at each hill and the water poured into them. It will leak out slowly and sub-irrigate the plant without any waste.

Keep Clean of Weeds.

Keep the garden, dry-land or irrigated, absolutely clean of weeds. It must be hoed and cultivated often and no crusts allowed to form. In planting dry-land garden it is a good plan to allow twice the space commonly allowed to the various garden crops.

Cabbage planted two feet apart in rows five feet apart have ten square feet to each plant. Parsons points out that with an annual precipitation of twelve inches this area would catch 625 pounds of water. He finds that a good cabbage can be raised on 300 pounds of water and a fine cauliflower on 400 pounds. If the moisture that falls is conserved through the year, half could be allowed for waste and still leave enough for a fine garden.

Asparagus and rhubarb do particularly well without irrigation. Peas, lettuce, and radishes should be planted as early as possible to avoid the heat. Beans always do well, also melons, cucumbers and squashes when deeply rooted, otherwise they wilt easily and become stunted.

It is a good plan to shade the lettuce bed with a board or two, according to the experience of Mr. Parsons. Strawberries under dry-land conditions should be planted two feet apart in the row and runners allowed.

Planting turnips late will avoid the little hoppers which eat the leaves. Scattering ashes about the plants will keep them away, also from the radishes.

Garden Planting Table.
Amount of Seed Required and Distances Apart of Plants and Rows.

Vegetables—	100 Ft. of Row. Seed	Distance Apart of Rows: Horse Cultiv.	Distance Apart of Rows: Hand Cultiv.	Distance Apart: Plants in the Row.
Beans	1 pt.	2½ ft.	1½-2 ft.	3 in.
Beets	2 oz.	2½ ft.	1½ ft.	2 in.
Brussels Sprouts	¼ oz.	2½ ft.	1½ ft.	18 in.
Cabbage	¼ oz.	3 ft.	2½ ft.	18 in.
Carrot	1 oz.	2½ ft.	1½ ft.	2 in.
Cauliflower	¼ oz.	3 ft.	2 ft.	1½ ft.
Celery	¼ oz.	3-5 ft.	2½ ft.	6 in.
Corn, Sweet	½ pt.	3½ ft.	3 ft.	1 ft.
Cucumber	1 oz.	5 ft.	4 ft.	2-4 ft.
Kohlrabi	¼ oz.	2½ ft.	1½ ft.	1 ft.
Lettuce	¼ oz.	2½ ft.	1½ ft.	6-10 in.
Muskmelon	1 oz.	6 ft.	5 ft.	3-5 t.
Onion Sets	1 qt.	2 ft.	15 in.	2-3 in.
Onion Seed	½ oz.	2 ft.	15 in.	2-3 in.
Parsley	½ oz.	2 ft.	15 in.	4 in.
Parsnip	½ oz.	2½ ft.	1½ ft.	3 in.
Pea	1 qt.	3 ft.	2 ft.	1 in.
Pumpkin	½ oz.	6 ft.	5 ft.	4 ft.
Radish	1 oz.	2 ft.	1½ ft.	1-2 in.
Salsify	1 oz.	2 ft.	1½ ft.	2 in.
Spinach	1 oz.	2 ft.	1½ ft.	2 in.
Squash, Late	½ oz.	7 ft.	5 ft.	3-6 ft.
Tomato	⅛ oz.	4 ft.	3 ft.	2-4 ft.
Turnip	½ oz.	2½ ft.	1½ ft.	3 in.
Watermelon	½ oz.	8 ft.	6 ft.	3-8 ft.

From Colorado Agricultural College Bulletin 276.
For dry-land garden allow at least twice the space indicated.

New Garden Bulletin Ready.

A bulletin from the Colorado Agricultural college, entitled "The Home Vegetable Garden," is just out in the nick of time to help those out who are a little lame in garden methods. It covers every phase of home gardening. It tells what to grow, the kind of soils adapted to various plants, fertilizers, all about preparation of soil, rotation of garden crops, hotbeds and cold frames, time of planting, thinning, setting out plants, cultivation, irrigation, preventing insect damage and plant diseases. It even gives suggestions on harvesting and storing vegetables. This pamphlet will be sent free for the asking. Address Colorado Agricultural College, Fort Collins.

A new bulletin published by the United States Department of Agriculture, entitled Farmers' Bulletin No. 1242, "Permanent Fruit and Vegetable Gardens," can be obtained free by writing to the Department at Washington, D. C. This is particularly helpful on the planting of the more important small fruits and perennial garden crops.

Perennial Garden Crops.

It is pointed out in this bulletin that there should be a great revival in the planting of small fruits and grapes in connection with home gardens, especially in sections where home orchards are failing. The care of small fruits as regards spraying and other requirements is more simple than that of the orchard fruits, and the small fruits can be grown on a much more limited space.

When space is available a section of the garden may be set aside for the permanent vegetables and the small fruits. The location of these permanent crops, however, should be such that they will not interfere with the plowing of the garden or the cultivation of the annual vegetables. In no case should the small fruits be crowded, it being best to plant a limited number, selecting those best adapted to the region.

Adaptation of Various Plants.

In small gardens the asparagus bed may be placed in one corner or in an offset at the end of the garden, and the hills of rhubarb along the side fence, where they will be out of the way of general cultivation. Sometimes the rhubarb or asparagus is arranged in a sort of row or narrow bed across the front of the garden, separating the garden proper from the lawn at the rear of the house. In large gardens everything should be planted in straight rows in order to facilitate cultivation.

Climatic and soil conditions restrict the planting of some of the vegetables and a number of the small fruits to prescribed localities. For example, rhubarb thrives only in those parts of the country where the ground freezes to a depth of four inches or more during the winter.

Generally speaking, raspberries will not stand very hot or dry weather. Blackberries can endure hot weather, but not hot drying winds. Dewberries are grown mostly in the warmer parts of the country. In very cold sections the plants of these fruits should receive some kind of winter protection.

Currants and gooseberries do best in a cool climate, but can stand quite warm summers if they have plenty of water. It is not permissible to plant currants and gooseberries in sections where the white pine is grown, because these plants harbor the blister rust, which is destructive to white pine trees. There are varieties of grapes for every section where any other fruits are grown. Strawberries will grow practically everywhere.

Time to Plant Garden.

Time of planting various garden plants will vary with distance north or south and altitude. Approximately ten days' difference may be allowed for each 1,000 feet of altitude and 100 miles of latitude.

Many vegetables must be started inside or in hotbeds during March and April in order to lengthen the growing season. The following from the Colorado Agricultural college garden bulletin gives the time of planting for the Fort Collins vicinity:

April 1 Planting—Outdoors: Plant one-year-old roots of asparagus; divide old roots of rhubabrb and plant; plant root cuttings of horseradish; put out onion sets. Indoors—Sow seeds of brussels sprouts; celery for late crop.

April 15 Planting—Sow seeds of the following in the field: Lettuce, radishes, kohlrabi, onions, parsley, peas, spinach, turnips, parsnips, salsify.

April 25 Planting—Plant in the field: Beets, carrots, cauliflower plants, Swiss chard, cabbage plants, celery plants—early crop.

May 15 Planting—Plant in field: Beans, sweet corn, tomato plants, melons, cucumbers, squashes, brussels sprouts plants.

The planting table on this page will be helpful to those who find difficulty in estimating the amount of seed or number of plants needed. It gives the rate of planting under irrigation conditions.

Making the Farm Orchard Pay

NO CORNER ON KNOWLEDGE NECESSARY TO SUCCESS.

SUCCESS with orchard work is a matter of knowing how, and there is no corner on the knowledge required to so handle the farm orchard as to make it a profitable investment. The average farm orchard, however, is an eyesore and many trees are being pulled up and the land turned over to general farming. The orchard on the general farm is often too large. A few trees given real orchard care on a general farm can be made a source of profit, while a larger orchard that must of necessity be neglected will be a source of disappointment and loss. The argument frequently is made that it is cheaper to buy fruit than it is to produce it, but as a matter of fact even well-to-do farmers use less fruit than they should because it is not grown at home.

It of course requires more knowledge to succeed with fruit than in the early days before insect pests and plant diseases became established, but with the store of information accumulated by our experiment stations and agricultural colleges and freely given out through the extension service, the farm press and in other ways, this is no longer a legitimate excuse for failing to grow at least enough fruit for home use.

What can be done to make these farm orchards pay for the land they occupy? As a rule they are given little or no attention. They are seldom pruned, sprayed, cultivated, or fertilized. The trees are left to shift for themselves, and consequently the fruit produced is hardly worth the picking. Properly cared for, no land on the general farm is more profitable than that devoted to growing a few fruit trees. With proper care the small farm orchard should be more profitable than any other similar area on the farm.

Now is the time to prune the trees, say the orchard experts at the Colorado Agricultural college. It should be done before the sap begins to start. The pruning should not be too severe if the trees have been neglected. A certain amount of the interior branches should be removed, so as to open up the trees and permit equal growth in all directions. If no pruning has been done for several years, it is advisable to prune moderately and continue the pruning each spring until the trees have the proper amount of wood left.

In the spring of the year a liberal amount of well rotted stable manure should be applied on the ground and plowed under. Shallow cultivation should then be done throughout the summer, and the trees irrigated. This treatment will stimulate the growth of the tree and also make it produce larger fruit. Old sod orchards will not be profitable unless the sod is plowed under and fertilizer applied.

Spraying is another important matter, and if neglected most of the apples will be wormy. The first spraying should be done just at the time when the petails of the flowers have fallen, using arsenate of lead at the rate of two pounds to fifty gallons of water. For tall trees it is necessary to have a good force pump. For a few trees a barrel force pump will serve the purpose. In about ten days to two weeks, the second spray should be applied, and the third spray about a month later. Three sprays if properly applied should keep the fruit practically free of worms.

To obtain the best possible results from the farm orchard the pruning, cultivating, fertilizing and spraying should be done regularly every year. A neglected orchard is no credit to a farm, nor are they profitable, while if the orchard is properly cared for it can be made to yield a handsome profit, besides furnishing the fruit for the family.

Believes in Summer Fallow.

We have had enough rain to make a crop on land well farmed. We are raising big crops on summer fallow. I have 100 acres of alfalfa that in seasonable years has cut three times each year, and a good crop at each cutting, and had a lot of pasture on the fourth crop. Wheat last year made a high average of thirty-seven to fifty bushels to the acre on summer fallow. I was on the ground when it was threshed.—C. W. Maynard, Lincoln county, Colo.

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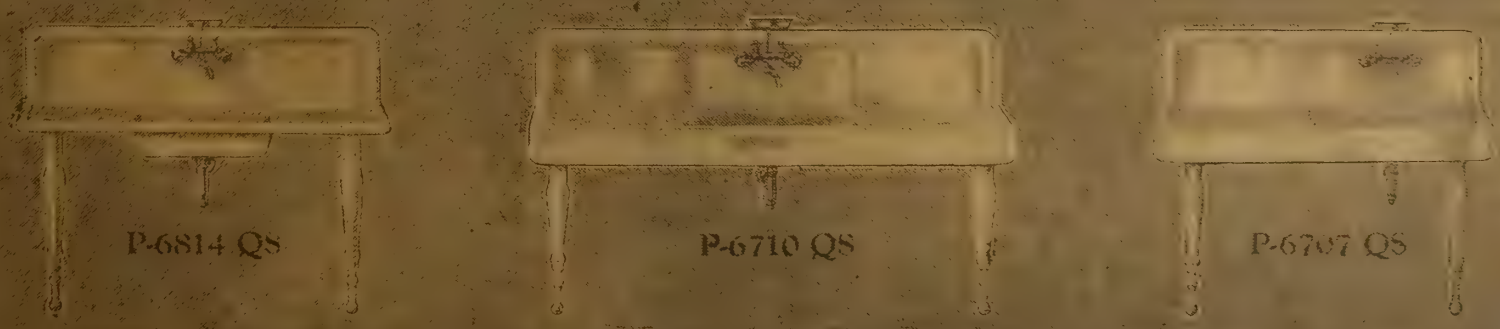

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Join the Farm Bureau.

Farm Bureau membership carries with it so many advantages that a forward-looking farmer can hardly afford not to join. It affords opportunity for doing many things locally and through federation of counties into a state federation, and the states into the American Farm Bureau Federation it has already made its influence felt in behalf of agriculture in a nation-wide way.

In considering the matter of membership in the farm bureau there is sometimes danger that we hold the price of membership—the membership fee—too close to the eye and cannot see out far enough to grasp the big out-standing things the organization can accomplish with proper financial support. No one who has a vision of what it means to have such an organization representing agriculture in all its relationships with other lines of business will question for a moment the size of the fee being collected to defray the necessary expenses of the work being done. It takes money to do organized work, and farmers cannot expect to stand up alongside organizations of other interests unless they finance their organizations adequately.

A state-wide farm bureau membership campaign is now being conducted in Colorado. Part of Larimer county has been gone over by solicitors and they report from 80 to 95 per cent of the farmers interviewed becoming members on the three-year basis at $5, with an additional $5 this year to defray expenses of the campaign and pay up indebtedness of the state organization.

In advance of the actual solicitation a series of meetings are held in every community in a county, and state and national organizers explain in detail the plan and purpose of the farm bureau movement. By this method all are able to inform themselves fully and be ready when the solicitor calls to decide quickly. This educational work is now under way in Weld, Morgan, Adams and Boulder counties. We would urge readers of Western Farm Life to be open-minded and take advantage of every opportunity to inform themselves fully as to the farm bureau program. Lack of information as to just what the Farm Bureau is and just what it can do with proper support is the most serious drawback to enlisting the support of farmers.

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Radio on the Farm.

Radio possibilities have grasped the imagination of farmers and their families as no other development of modern science has done. Nearly one-third of our population live on farms. One of the drawbacks of rural life has been the isolation of the farm home. Good roads, rural mail delivery, telephone and automobiles have helped to overcome this condition, but with the introduction of wireless telephony with its broadcasting of crop and market reports, weather, music and entertainment and the latest news of the day, it is not to be wondered that radio clubs are springing up in every town and hamlet and every boy who can get possession of the necessary receiving outfit is becoming a radio "bug."

The importance of the radio to our farm population was the dominant note in the radio telephone conference recently held in Washington. No other single use of radio, excepting for marine and aerial purposes, should take precedence over its utilization for the benefit of agriculture.

For quickly bringing the fullest use of radio service to the country the forming of boys' and girls' radio clubs is to be commended. Already the home demonstration agent of Boulder county, Colo., has a number of clubs in operation. Farm bureaus all over the country are installing receiving outfits. The extension department of Colorado Agricultural college is investigating the possibilities of putting in a sending station, the Kansas agricultural college is to put in a sending station this summer, and at least one Kansas farm bureau has already installed a radio marketing service. We would urge that every encouragement be given to the forming and conducting of "Farm Radio Clubs."

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Stockyards Control in Action.

Already we are beginning to see the advantages of having the Packer and Stockyards Control Act in operation. This act places the control of all public stockyards and packing houses under the United States Department of Agriculture. Early in March Secretary Wallace issued a complaint against a hundred or more livestock commission companies and buyers on the St. Louis market for alleged violations of the act. It was charged that these firms conspired to institute a boycott against the co-operative firms now doing business at the yards in the effort to prevent farmer co-operative organizations from succeeding. The firms cited will have to appear and defend themselves against this charge at a public hearing before the Secretary of Agriculture or his representative and if unable to clear themselves an order will be issued requiring them to cease from this violation of the law.

Recently a proposed increase of 20 cents a bushel for corn fed to stock in the Indianapolis stockyards was held up by the same authority. The stockyards company gave notice of a raise from $1.10 a bushel to $1.30, and the stockmen could see no reason for such increase and made the complaint. The reasonableness of the increase will be determined at the hearing.

Stockmen all over the country will be interested in watching the developments in the enforcement of the Packer and Stockyards Control Act. It took many years of organized effort to get this act through Congress.

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Let Us Be Fair.

No other farmer in the world equals the American farmer in production to the man. This supremacy is based on the extensive use of the best labor-saving machinery made anywhere in the world. American agricultural machinery has set the pace, as has the American farmer. Agriculture has been passing through strenuous times and we have been prone to think no other industry has been quite so hard hit. A glance through the annual reports of some of our farm machinery companies compels us to change our minds as regards this great industry so inseparably linked with our American system of agriculture. If machinery companies ever enriched themselves at the expense of farmers they did not do it the past year. Losses running into millions show in some of these annual statements. Many concerns have had to fight for their very existence in the year past. Materials, making up 80 per cent of the cost of producing implements, are still 65 per cent above the pre-war level, but despite this prices of farm machinery are less than 50 per cent above pre-war prices.

Farmers are of course in no way to blame for this condition with which the farm implement companies are struggling, but in the spirit of fair play we cannot afford to ignore the fact. Farmers are just as much concerned in having the implement companies doing business on a sound basis as they are interested in having farmers prosperous. Any serious setback to the implement business will react against farming as a business. We cannot hope to have further declines in prices for some time to come and if in need of machinery there is little reason for holding off for lower price levels.

Grain Growers' Annual Meeting.

Action at the first annual meeting of the U. S. Grain Growers, Inc., put the delegates on record for continuing the policy outlined by the Committee of Seventeen, basing the whole marketing program on the already established co-operative elevator associations as the foundation and favoring the plan of permitting each member to decide whether to pool his grain or sell direct. Spirited opposition to the continuance of this policy featured the convention, but the vote supported the original plans. J. D. Pancake of Loveland, Colo., who carried the 804 votes of Colorado, was chairman of the credentials committee and was elected one of the twenty-one directors for the long term. C. H. Gustafson as president received the full vote of the convention.

It was stated in the opening session that the U. S. Grain Growers, Inc., had plenty of work to do without trying to become associated with other co-operative organizations following different plans of operation. According to President Gustafson, the best form of co-operation would consist "of working separately on the details and problems that concern us differently and then working whole-heartedly together on those problems that are of mutual concern."

The sixty delegates present carried a voting strength of 41,730 votes, one vote for each individual member of the organization. The actual membership has now almost reached the 53,000 mark. Illinois delegates carried 10,251 votes, heading the list in voting strength. Nebraska came second with 8,046, North Dakota third, Indiana fourth, Missouri fifth and Iowa sixth.

This issue closes too early for us to report in detail the action taken at this important convention. We will give further information in our next issue.

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Beautify Home With Trees.

This is tree-planting time. Nothing about a place adds more to the appearance of permanence than a well worked out scheme of tree and shrub planting. If you look upon the farm house and its surroundings as a permanent abiding place for the family, in other words, a true home, you will want to have trees and shrubs growing. It takes time to grow a tree and too often we lack in imagination and cannot visualize the future sufficiently to carry out the necessary preliminary work in beautifying the home surroundings.

"More trees! Let's go!" is the slogan adopted by El Paso county this year. Special articles on tree planting have appeared in the local county papers. The special bulletin, "Trees for Non-Irrigated Regions of Eastern Colorado," by State Forester Morrill, published by the extension department of the Colorado Agricultural college, has been distributed over the county. The county farm bureau and the chamber of commerce of Colorado Springs are backing this campaign for more trees in the county. It is a most commendable movement and other communities might well promote similar campaigns.

For several years the State Forester has distributed trees at cost each April. They are low enough in price so that groves and shelter belts should be within the reach of all who will make the effort to set the trees and give them proper care. The whole idea is service and not profit. Those who take advantage of this opportunity will profit eventually in the making of a more beautiful farm home, thus bringing about more pleasant living conditions and also adding to the sale value of the place. In our issue of March 15 the price list of these trees was printed. If you have not already done so, send for some trees and do your part in adding to the attractiveness of the community in which you live.

Subscription Price Reduced.

Western Farm Life is glad to announce a reduction in its subscription rate, effective April 1.

Cost of paper and other materials that enter into the expense of publishing a farm magazine have declined materially during the past several months, and Western Farm Life is pleased to pass this saving along to its readers.

The new rate is three years for $1.00. All subscriptions now on our books will be extended so that all of our subscribers will benefit by the new reduced rate.

News of the Farm Bureaus

Membership Campaign Starts.—A state wide membership campaign in Colorado is now on. Following a meeting in Fort Collins, March 4, attended by sixty or more farmers of Larimer county, eight solicitors started March 6 to sign up membership. Through a series of community meetings held by Chas. G. Stonebraker of Independence, Iowa, a farmer now working for the American Farm Bureau Federation as organizer, every farmer interviewed will be well informed on the farm bureau program and will be ready to make a quick decision. Mr. Stonebraker has been assisted by J. B. Pancake and J. M. Rodgers in the advance work. The next counties to be canvassed are Weld, Morgan, Adams and Boulder. Farmers of Colorado are now to have the opportunity of forming strong county organizations and also an efficient state organization. The need of stronger and more complete organization is recognized by every well informed farmer. The educational campaign in advance of the solicitation is awakening farmers to their responsibility for perfecting the farm bureau organization. Those opposed to the farm bureau have had ample time to present their side of the case and in most instances have made good use of the opportunity. The farm bureau men will make a fair presentation, backed by actual facts and accomplishments, and let the farmer be the judge.

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Capper Succeeds Kenyon as Bloc Leader.—The agricultural bloc of the Senate has elected Senator Arthur Capper of Kansas as chairman to take the place of Senator Wm. S. Kenyon of Iowa, who resigned from the Senate to accept a federal judgeship. Senator Kenyon, in formally resigning from the chairmanship of the bloc, stated that it had been a source of more pleasure to him than any other activity in which he had engaged since he entered the Senate. He said: "Many months ago Gray Silver of the American Farm Bureau Federation and I talked over the matter of agricultural legislation and the need for organizing to obtain it. As a result there was called a meeting downtown in the American Farm Bureau Federation's office last spring for the purpose of discussing agricultural legislation and deciding upon ways and means of promoting it. The agricultural bloc has been maligned and lied about more than any other group in Congress and I have enjoyed the whole proceeding. The idea has been sold to the public and is very favorably received at least in the West and South. It is gaining strength every day and we have, with the co-operation of others, been able to be of much help to the country in the passage of a number of agricultural bills."

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Suit Buyer's Dollar.—C. J. Fawcett, director of the wool marketing department of the American Farm Bureau Federation, has figured out what portion of the suit buyer's dollar finally gets into the pocket of the wool grower. On a suit which retails for $40, the grower's share is $1.96. Hence the wool grower's part of the suit buyer's dollar is 4.9 cents. Mr. Fawcett says: "The exceedingly low market value of domestic wool that has prevailed for almost two years, has seemingly had little effect on the retail values of articles manufactured therefrom. The adverse condition that the wool growing industry has been forced to meet since the war, has forced hundreds engaged therein out of business, and caused liquidation of breeding flocks in order to meet financial obligations. Strange as it may seem, no material benefit has been derived by the consuming public from a wool market so low as to spell ruin to many engaged in its production."

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Co-Operative Firm Takes First Place.—The Producers' Livestock Commission Association, which opened for business at the National Stock Yards, East St. Louis, Ill., on January 2, finished its eighth week of business in the enviable position of first place among the fifty-five commission firms in that market. This company is one of the chain of farmer-owned and controlled livestock commission houses which will be joined together by the National Livestock Producers' association. It is organized according to the plan worked out by the Farmers' Livestock Marketing Committee of Fifteen.

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Important Information on Farm Bureau Dues.—At the last annual meeting of the American Farm Bureau Federation an amendment was made to the constitution to the effect that each state remit all dues collected monthly. This amendment has been ratified and is now in effect. It is therefore necessary that each county remit to the state monthly all state and national dues collected. The state officers are anxious to comply with this amendment and need the co-operation of the county farm bureaus. In fact, the state and county officials can be held responsible for the disposition of state and national dues.

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Boycott of Co-Operatives Charged at St. Louis National Stockyards.—The Secretary of Agriculture has issued a formal complaint against every livestock commission firm that is a member of the St. Louis Livestock Exchange, and against the principal order buyers, dealers and traders at the St. Louis National Stockyards, about 110 in all, who have refused to do business with independent commission companies, not members of the Exchange. They are cited to appear in the rooms of the Federal Court at East St. Louis, Ill., to show cause, if they can, why an order should not be issued against them, under the Packers and Stockyards act, to "cease and desist" from the practices complained of.

On November 16 last year the first of the co-operative commission companies, the Farmers', began doing business at National Stockyards. About the time of its entry into the market, a meeting of members of the St. Louis Livestock Ex-

(Turn to Page 20).

From the Nation's Capital

MEASURES TO BETTER FINANCE FARM AND RANCH OPERATIONS ARE BEING CONSIDERED.

E. E. Reynolds.

FOR many years Congress has been attempting to devise a system of farm credits which will adequately meet the needs of all farmers. This includes credit for the farmer who owns land and wishes a loan to make improvements thereon; for the man who owns or operates a farm and needs capital to carry his livestock through the growing period to marketing, or enable him to market his crops in an orderly manner, and for the deserving man who desires to buy and operate a farm and who has good character, habits of industry and thrift, and practical experience as his only basis of credit.

The first class will be fairly well provided for when the Federal Farm Loan Board functions effeciently and to the extent intended by its promoters. The new Anderson-Lenroot bill, which has been considered at some length in congressional hearings, is designed to meet the requirements of the farmer and stockman in the production and marketing of staple crops and livestock.

The Anderson-Lenroot bill which Dr. T. C. Atkeson, Washington representative of the National Grange, characterizes as "coming nearer meeting the requirements than any of the many other bills that have been introduced, but is not the last word in farm credit legislation," is the child of the congressional joint commission of agricultural inquiry, of which Representative Sydney Anderson of Minnesota is chairman. It has the endorsement of the Federal Reserve Board, the Treasury Department, and with a few minor changes, of the Federal Farm Loan Board, and in general principles it meets the approval of the farm organizations represented in Washington.

This bill amends the Federal Farm Loan Act by establishing a Farm Credits Department in each Federal Land Bank. It provides a means whereby farmers can get loans running from six months to three years to be used in raising, fattening and marketing livestock, and on all staple farm products secured by warehouse receipts.

In presenting the bill, Representative Anderson says the commission had in mind not only the present situation, but undertook to set up machinery that would meet the farmers' requirements in the future, a farm credits system which will permit the payment of loans on maturity by the products of the farm itself. It would give discount privileges to all banks on farm paper running from six months to three years.

A farmer who wishes to secure a loan with which to purchase cattle which he proposes to fatten, would apply to his cattle loan association or local bank for a loan for eighteen months. The bank, knowing it could discount the note, makes the loan for the eighteen months. The bank would apply to the Farm Credits Department of the Federal Land Bank to discount this note with its endorsement. The Farm Credits Department would take the note at a rate of discount fixed by the Federal Land Bank.

The Farm Credits Department would issue a series of debentures covering these loans. Back of the debentures at all times there would be the cash or notes plus the bank capital.

Senator Lenroot says that in addition to the privilege extended, the existence of the privilege it gives to farmers to secure loans through their cooperative associations, will be a warning to banks that refuse to extend their loan facilities to farmers.

While endorsing the bill, Dr. Atkeson said there were many young men, some graduates of agricultural colleges, who desire to farm, but have nothing to predicate a loan. He thought that the bill should provide for these men.

"The intermediate form of credit such as is provided by the Lenroot-Anderson bill dovetails into the efforts which the farmers are making to market their commodities over a longer period and in an orderly manner," says Gray Silver of the American Farm Bureau Federation.

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Annual Agricultural Appropriation Bill.—The annual appropriation bill for the U. S. Department of Agriculture for the fiscal year beginning next July, as reported to the House, carried a total appropriation of $34,978,033. This is $3,710,026 less than the total of the 1922 appropriation. Several of the bureaus will have less money to spend next year than the present. The Bureau of Animal Industry and Federal Horticultural Board are cut only slightly, while the Forest Service is cut $458,000, and the States Relations Service, which gives aid to the county agent work, will have $561,340 less to spend than during the present year.

The new Bureau of Agricultural Economics will receive $84,300 in excess of the Office of Farm Management and the Bureau of Markets, which it succeeds. An appropriation of $291,707 is recommended for the encouragement and adoption of improved methods of farm management and farm practice, of which sum $150,000 may be used in ascertaining the cost of production of the principal staple agricultural products.

An appropriation of $410,000 is allowed for the enforcement of the packers and stockyards act, and $103,600 for the administration of the future trading act. A paragraph of new legislation is recommended in the bill which provides that the maximum salaries of any scientific employe shall not exceed $6,500. The present limitation is $4,500 per year.

In outlining the various provisions of the Department of Agriculture appropriation bill, Representative Anderson said that of the total appropriations for the department, $18,000,000 is spent for the conduct of regulatory services, many of which are as directly of concern to the consumers as they are to the farmers. Approximately $8,000,000 is spent for research of various kinds. Three million dollars is spent for service work, such as that involved in the inspection of fruit and vegetables, and $4,000,000 is expended for extension.

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Thinks Secretary Wallace Is "Making Good."—National Grange Master S. J. Lowell, while in Washington recently, said it was his opinion that Secretary of Agriculture Wallace is efficiently filling his position, and that the Department of Agriculture is doing everything within its power to help the farmers.

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House Cuts Appropriation for Drouth Areas.—The Senate bill appropriating $5,000,000 for the purchase of seed grain for farmers in the drouth stricken areas of the Northwest, was cut to $1,000,000 when it passed the House. The greater part of the funds will go to farmers in North Dakota, Montana, Idaho and Wyoming. The money will be loaned by an official of the Department of Agriculture.

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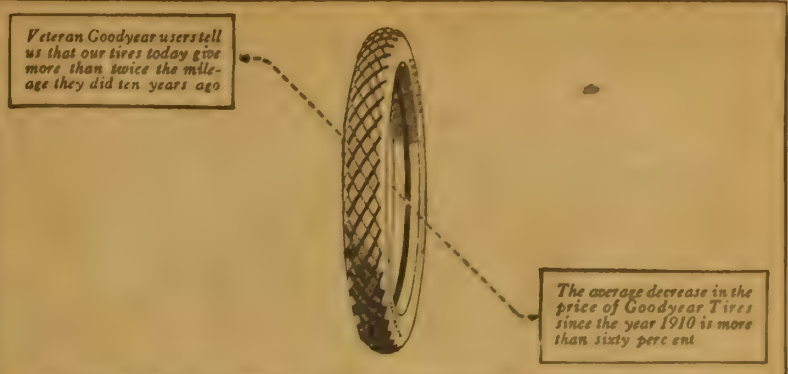
Agricultural Department to Control City Market.—The Department of Agriculture is about to try its hand at controlling a city market, having taken over the large Central market in Washington. Sanitation will receive considerable attention on the part of the government. A schedule of regulations will be issued for the conduct of business by those using the market.

::::

Hearings on Amendment to Federal Farm Loan Act.—Hearings before the House Banking and Currency committee have been held on two bills amending the Federal Farm Loan act. One provides that the expenses of the Federal Farm Loan Board shall be assessed semi-annually upon the Federal land banks and joint stock land banks. It was testified before the committee that this assessment, now paid out of Federal Treasury funds, would amount to $250,000 levied upon the twelve Federal and twenty-five joint stock land banks.

The other bill provides for the crea-

(Turn to Page 15.)



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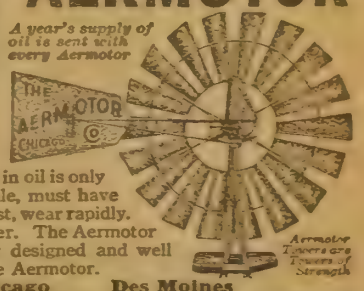

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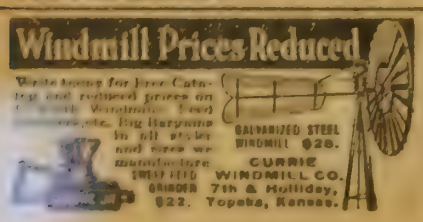
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Plant Trees in April.

Trees are almost essential to the establishment of permanent homes. No one can be happy and contented where there are no trees. It takes time to grow trees and they bring no direct income, so growing trees is often neglected. We have to look so far into the future in order to see the benefits from our efforts to beautifuy the home and surrounding community that too often the farm home remains bleak and bare of trees and shrubbery.

There is nothing easier in dry farming than to grow trees, says E. R. Parsons, after demonstrating that it can be done most successfully under Colorado plains conditions. He points out that they discovered this in California fifty years ago and now produce enormous quantities of olives, walnuts, grapes, prunes, peaches, apricots and other similar products without irrigation with an average precipitation of 17 inches.

The secret of growing a tree under dry-land conditions is that you can plant it two feet in the ground in a subsoil with 17 per cent moisture, enough with proper mulching to carry a tree a whole season without a drop of rain. Mr. Parsons made sure of this 17 per cent moisture in two feet of soil by planning a year ahead, plowing, fallowing until the moisture had been accumulated. Nature may provide it during the winter months, in which case it is safe to plant trees in the spring. After planting, as in all dry-farming, there must be cultivation with the aim in view of a conservation of moisture as well as accumulation. There must be no run-off. Enough cultivation to keep weeds down usually will hold the moisture stored.

Plant trees for shade and windbreaks in April, says W. J. Morrill, State Forester, who is distributing nursery stock to farmers at cost. The price list and conditions were printed in the March 15 issue of Western Farm Life.

Proper handling of the trees after they are received is important. Frequently a bundle of trees arrives in good condition but the purchaser does not call for them until they have been at the express office several days. During this period the roots dry out and die and when the trees are set the owner wonders why they did not grow and perhaps makes the charge that the trees were dead when received at the express office. In ordering trees try and be at the station when they arrive and moisten the roots immediately. As soon as you reach home dig a shallow trench and cover the roots and most of the stems with moist soil. Young trees can safely be kept for several weeks "heeled in" in this manner.

Do not plant trees in raw prairie soil, especially hard wood species. Land for trees should have been cultivated for a year or two before attempting to make your plantings. In the deep-hole method of setting the holes should be deeper and broader than the roots of the trees. Throw rich top soil, mellow and free from lumps, back into the hole to make a bed to receive the roots. In moving the trees from the place where they were "heeled in," keep the roots covered with soil. Evergreens are killed if the roots are exposed for even a minute. All evergreens are characterized by their resinous sap. Exposure to the air hardens the sap of the tiny rootlets and no amount of soaking will revive a tree where this has occurred. Evergreens are among our most hardy and drouth resistant species of trees, but they require painstaking care in handling from the nursery to the planting. Many a tree has been dead when planted because of a short exposure of its roots to the air and sunlight.

In non-irrigated planting, the trees must have two or three times the spacing given in irrigated conditions. If too closely spaced, the trees stop growing after the roots meet those of other trees and competition for moisture becomes keen.

Place the tree only an inch or two deeper in the ground than it stood originally in the nursery. With the hands, firm the earth tightly around the fibrous roots in order that the young root-hairs may soon get nourishment. Plant the tree very firmly and carefully; this is an essential secret in successful tree growing. Correct and incorrect methods are illustrated in Bulletin No. 123, "Trees for Eastern Colorado," which will be mailed free on application to Extension Department, Colorado Agricultural College, Fort Collins, Colo.

Start Asparagus Bed.

Every farm garden should have a good asparagus bed. It requires some forethought and planning to establish a productive bed of asparagus. It must have, first of all, very rich soil. The bed can scarcely be made too rich. If merely for home use and not for marketing, a large bed is not necessary, for a couple of dozen hills or bunches will furnish the average family all that is needed. A corner of the garden in asparagus well repays the care needed to make it and keep it productive.

Dig out for the hills and put in plenty of rich and well-rotted stable manure. Acid phosphate and cottonseed meal may be added to great advantage. Mix the manure and meal well with the soil and set the roots in the hills, low down, so that the dirt may be worked to them as they come up.

Plants may be grown from seed, but one can get much quicker returns by purchasing two-year plants from some nursery. It takes three years to get asparagus from the seed. Two-year plants, well taken care of and kept growing the first year, will make asparagus ready for eating the next year.

More manure should be applied each year or each two years, after the cutting season, for the plant is a gross feeder. It is important that the necessary plant foods be supplied liberally so that the growth of the tender shoots may be rapid and that they may be as large as possible.

The cutting season begins as soon as the shoots are big enough to eat, that is about five or six inches high, and lasts for about two months. The tops should then be allowed to grow, for they store up plant food for the coming season.

Legumes absorb three times as much lime from the soil as non-legumes.

FREE $10.00 IN GOLD! FREE

ARE you getting ahead and making money out of your farm or ranch? If you are, we want to tell the other readers of Western Farm Life about your good methods and farm practices. This will be of direct benefit and help to them. We want letters from readers on

"How I Am Making Money Out of My Farm"

To the one that sends us the best letter we will give a prize of $5.00. To the one sending second best letter, $3.00, and the third best letter $2.00. Honorable mention will be made of all other letters suitable for publication.

What we want is just a plain ordinary letter telling about the size of your farm, number of acres under cultivation, the kind of crops grown, methods of planting, cultivation, harvesting and marketing; number of hogs, cattle, sheep and poultry. How you are making your livestock pay; about your farm machinery. Have you a tractor, truck or automobile, farm lighting plant, etc.? What is the condition of your crops, and your neighbor's crops at the present time.

Do not fear that lack of writing ability will handicap you in competition for the prizes. The letters will be judged entirely upon the value of the facts that they present. Your letter must be mailed by April 20. The time is short, so get busy right away. Address your letter,

EDITOR, WESTERN FARM LIFE,
1518 Court Place, Denver, Colo.

Grow Some Rhubarb.

Rhubarb is one of the necessary "fruits" required by the human family. It will grow in almost any kind of soil, but for best results should have a fertile sandy loam with a well drained subsoil. It is a gross feeder and must have a porous and very fertile soil.

For a few plants, deep holes may be dug and partially filled with rich soil and any old bones which may be gathered about the place. Vigorous plants having one strong eye supported by a healthy root of five or six inches in length are the ideal ones to plant. When properly planted the eye will be about one inch below the surface of the soil. The first year's growth should not be pulled at all. Moderate pullings may be made during the second year, after which time you may pull all that the plant will produce. Care should always be exercised to prevent injury to the crown, for when this is seriously damaged many small stalks is the result. It is best to renew the rhubarb about every five years, although some pull from the same patch for ten or twelve years.

Start Plants in Treated Soil.

To be sure of obtaining healthy young plants of tomatoes, peppers, eggplants, cabbages, lettuce, and so on, for transplanting to the home garden or eslewhere, treat the soil in the seed box with boiling water before planting. Most all soils commonly used for seed beds contain one or more kinds of harmful molds or fungi.

Before treating the soil it should be placed in the box ready for seeding. Make a few holes in the bottom of the box for drainage. Pour on the boiling water slowly at the rate of two gallons to a box of soil one foot square and four inches deep, and at once cover with a newspaper to help hold the heat for a longer time. After a few days or whenever the soil has dried out enough the seed may be planted. Be careful that no diseased soil or anything else which migh spread the trouble gets into the box.

Young plants grown in this treated soil not only have white, sound roots, but also have a healthy, vigorous appearance above ground. Besides this, seeds sprout better and the plants grow much faster than those planted in untreated soil.

Prairie Dog Poison.

After experimenting with forty-five different combinations for preparing poison prairie dog bait, W. L. Burnett of the state entomologists office developer Colorado formula No. 46 with the discovery that petrolatum oil was just the thing to prevent the poison from dusting off the oats. The oil is odorless so the dogs did not object to eating it.

But this oil met more than the requirement of prevention of dusting. It also had the valuable property of holding the freshness of the bait. It has proven to be just as attractive to the dogs many weeks after, as it was the day of mixing. With three years' trial in the field, using about 40,000 gallons of poison in combination with petrolatum oil, the farmers of the state are rapidly being convinced that prairie dog bait mixed according to Colorado Formula No. 46 is the best on the market.

The poison can be obtained of the Entomological Department of the Colorado Agricultural college at Fort Collins, at cost.

Plants Should Be Hardened.

Before the plants are set in the garden, either from the hotbed or the cold frame, they should be gradually hardened to outside conditions by giving them more ventilation each day. Finally, remove the sashes entirely on bright days and replace them during the nights. The aim should be to produce strong, healthy plants that will make a quick start when placed in the garden.

Grange Membership Prizes.

Cash prizes of $25, $15 and $10, to the subordinate granges ranking first, second and third in membership gains during the year 1922, will be given by the Colorado State Grange, according to action taken by the executive committee at a recent meeting. Similar prizes of $25, $15 and $10 also will be given to the granges ranking first, second and third in percentage of membership gains during the year. The gains in these contests will be only members admitted by initiation. Members admitted by limit card or transfer, or by reinstatement, will not be considered.

Wheat Pooling Associations Meet.

Tentative plans were made for a "national supervising agency" by representatives of the National Wheat Growers' Association and the Northwest Wheat Growers' Association at a meeting held in Kansas City, March 9 and 10. This agency is to be known as the "American Wheat Growers' Exchange." The organizations represented are committed to a 100 per cent pooling plan for marketing wheat. A committee was appointed to meet in Chicago, March 20—21, for further conference.

This committee is composed of Geo. C. Jewett, manager of the Northwest association; Aaron Sapiro, legal adviser to the wheat pooling organizations; D. J. Murley, president of the Oklahoma Wheat Growers' Association, and W. C. Lansdon, national lecturer for the Farmers' Union.

Work of putting the "American Wheat Growers" in shape for actual operations "will await developments of the next few months in the central states," according to semi-official information published in "The Producer," official organ for the Northwest association. "The federation would be organized at once," says this publication, "were it not for the fact that the northwest wheat growers found that the middle western associations were not yet far enough advanced in their organization work to permit of forming the national association immediately. The Northwest Wheat Growers' Association has found that at the present time none of the middle western organizations is in shape actually to handle wheat."

Middle western associations referred to by the official organ of the northwest association, are the state associations of the National Wheat Growers, who came into existence coincident with their demand for $3 wheat in the fall of 1920. Some organization work has been done in each of the states of Oklahoma, Kansas and North Dakota, and efforts have been made to organize in Colorado and Nebraska. The marketing plan provides no means of handling the grain either at the local shipping point, financing its movement or disposal to ultimate consumers. Upon the entry of the U. S. Grain Gowers, Inc., in the field a few months later, the pooling association based its organization campaign upon attacking the new organization as having had its origin in the Chicago Board of Trade and directed by "big business men." The U. S. Grain Growers adopted the policy of refusing to fight another farmers' organization, however, and presented its plan purely on basic principles.

In view of these facts, U. S. Grain Growers' officials regard action taken by the wheat pooling organizations with reference to "demanding a cessation of hostilities" with considerable interest. They are unable to understand, they say, why a "committee headed by Geo. C. Jewett was instructed to communicate with the U. S. Grain Growers and provide safeguards against further trouble between the associations."

Just what significance if any is attached to the fact that this committee of four men met in Chicago coincident with the first annual meeting of the U. S. Grain Growers, Inc., remains to be seen. Some significance is attached, however, to their announcement that the plan which they evolve will be submitted to state meetings of interested farm organizations and finally to a "ratification" conference, to be held in Denver. This program is identical with that instituted by the "Committee of Seventeen" in submitting the U. S. Grain Growers, Inc., plan to all farm organizations, at which time the organizations participating in the present move took part and voted for the adoption of the U. S. Grain Growers' plan without change.

A recent announcement to the effect that W. C. Lansdon, a lecturer for the National Farmers' Union, was appointed on the organizing committee of the American Wheat Growers, as a "representative of the public, appointed to the board of the Kansas wheat marketing associations by the Secretary of Agriculture," occasioned some little surprise in farm organization circles. In reply to an inquiry made direct, the Secretary of Agriculture replied that "he has received no commission from the Federal Department of Agriculture."

We give the foregoing in order that farm organization men may watch the developments with full knowledge of what has taken place to the best of our information.

The best spring tonic is a diet of the right kind of food.

Why Not a Hotbed?

One who has never had a hotbed in connection with the home garden will be astonished at the possibilities it opens up. Once tried you will never again be without one.

A hotbed gives the gardener at least a month's lead on the season, a chance to get all his vegetables and flowers going in advance of the outdoor planting season, and when it is time to plant the seeds in the open ground he may set sturdy seedlings in the beds ready to go along and give him a crop from two weeks to a month earlier than usual.

A hotbed is merely a wooden frame or, if permanent, made of concrete, to carry glass sash. They may be made of any size to suit a gardener's convenience, but the standard size of frame and sash is the 3x6 foot unit.

A hole is dug in the ground slightly larger than the frame. This is filled to a depth of from 15 to 18 inches with fresh horse manure, a strawy manure being the best, which has been stacked up and turned from time to time for several days in order to distribute the fermentation more evenly. This is packed down by tramping it, the manure extending a few inches beyond the walls of the frame on all sides. The frame is then placed upon the manure and four to five inches of good garden soil are spread over the manure.

At first the manure will ferment quite violently and will be altogether too hot for planting. The sash should be raised frequently to lower the temperature and to permit gases to escape. A thermometer should hang on the side of the frame where it can be seen easily. Sow the seed when the thermometer shows the temperature to be 80 or 85. Close attention to watering and ventilation must be given. The soil should not be allowed to dry out nor yet to become water soaked. It is best to water early in the day, so the plants will dry off by night and minimize chances of damping off.

Hotbeds are sometimes started as early as January, but this is hazardous, as the manure may become spent before the cold has departed. Usually March is the month to start hotbeds, and for many purposes April is not too late.

It is easy to make homemade hotbeds, but there are also frames knocked down, with the sash, all ready to be shipped and set up, on the market.

Government Grows Beet Seed.

Success in producing sugar beet seed from beets planted in Florida has been so satisfactory under the direction of representatives of the United States Department of Agriculture that arrangements have been completed for the planting of the third crop at Oldsmar next October. The work from the beginning has been under the general direction of Dr. C. O. Townsend, pathologist, and Dr. W. H. Burns, agriculturist, who has had immediate charge of this work for the past two years. They are Uncle Sam's experts in sugar beet improvement.

The second crop is now being harvested at Oldsmar and will be shipped to the University of Michigan, Ann Arbor, Mich. After a period of rest in dormant condition the best roots will be replanted and will bear a crop of seed next fall. The experts expressed themselves as being pleased with the production of sugar beet seed in this manner and the work has progressed beyond the experimental stage. The government experts are satisfied that this repeated demonstration of practical results may mean much for the future of the beet sugar industry.

Dr. Townsend and Dr. Burns recently made a careful personal inspection of the beets which have been grown at Oldsmar under their direction by Albert H. Laycock. There have been four other plantings of sugar beets in Florida by the Department of Agriculture, and for two years the Oldsmar beets have shown best results by a considerable margin.

Lime Benefits Garden Soil.

An application of about ten ordinary pailfuls of hydrated or airslaked lime to a plot of garden ground 30 by 60 feet will generally be beneficiail. Lime has the effect of loosening and pulverizing heavy clay soil, and binding loose, sandy soil. Lime also corrects any sourness of soil due to lack of proper drainage. Proper drainage should be provided, however, as a garden cannot be expected to do well in poorly drained soil. Lime should always be applied to the surface and in no case should it be put on the land at the same time as commercial fertilizer.

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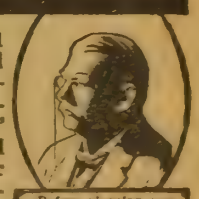

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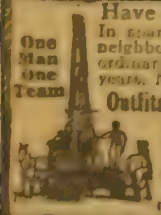

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Litre About Equals Quart.

What part of a gallon or quart is the litre? In doctoring a sick horse I found the directions used this measurement and I was unable to follow the prescription.—R. E. A., Huerfano county, Colo.

A litre is the liquid measure in the metric system. It is 2.113 pints, in other words, is about one-tenth more than a quart.—G. C. W.

Pulling Cottonwood Stumps.

Can green cottonwood stumps averaging 18 inches in daimeter be pulled with a team and two or three pulley blocks, or will it be necessary to use dynamite? This land is to be plowed and leveled after clearing.—W. J. M., Utah.

Stumps of this size can be pulled more economically than dynamited. There are a number of very successful small stump pullers on the market. I am unable to state whether the set of pulley blocks mentioned will answer the purpose or not. Advertisements of several dependable stump pullers appear in Western Farm Life.—G. C. W.

Obtaining Prairie Dog Poison.

Where can I buy the poisoned oats for poisoning prairie dogs, referred to in article entitled "Kill Off the Prairie Dogs." Have you any literature of how to get rid of these pests? I have tried strychnine and used a gas preparation, but without any great success.—E. A. R., Washington county, Colo.

The Colorado Agricultural college has developed a formula known as Colorado No. 46, and sends out the poisoned bait at cost. For information address C. L. Corkins, State Entomologist, Fort Collins, Colo. The office of the Biological Survey, Old Customs House Building, Denver, is co-operating in the campaign for the destruction of prairie dogs and will be able to supply helpful literature.—G. C. W.

Feeding Milk Cows Potatoes.

Which is better for milk cows, raw potatoes and turnips, or cooked? How much should be given a cow daily?—E. L., Wyoming.

Potatoes are more commonly fed to hogs than to cows. For hog feeding it is best to cook them, but they can be fed to cows raw. Cows should not be given more than thirty or thirty-five pounds daily, as heavy feeding is likely to injure the quality of the milk and butter. In feeding the sprouts should be removed, as they contain a poisonous principle which might be injurious. Turnips have been largely used in feeding sheep, particularly in the early fall. They should not be fed heavily to cows, as the flavor would injure the milk.—G. C. W.

Wants Certified Seed Potatoes.

Where can certified seed potatoes be purchased and at about what price? What varieties are best for dry-land planting on a chocolate loam soil?—Mrs. E. K. F., Cheyenne county, Colo.

Certified seed potatoes are not easy to obtain. They are being shipped in by the carload from northern states. They will cost more than ordinary seed, but not enough more to make up for the more satisfactory returns. Write to Dr. Sandsten, Horticultural Department, Colorado Agricultural College, Fort Collins, relative to certified seed. The certification of seeds in the state is handled by this department and he may be able to put you in touch with some one having seed for sale.

You probably will find the Irish Cobbler and Early Ohio as good varieties as you could plant. The Cobblers are about a week or ten days earlier than the Early Ohios.—G. C. W.

Raising Sweet Potato Plants.

How are sweet potato plants raised and where can I buy seed sweet potatoes?—Mrs. C. B., Nebraska.

Sweet potatoes are propagated by means of sets or plants which are grown in large numbers from the smaller sized potatoes placed in a hot bed a few weeks before planting time. Prepare an ordinary hot bed and cover the manure with about three inches of sandy soil. Place the seed potatoes on this just far enough apart so they do not touch and cover with three inches of sandy soil. The hot bed can be made about the first of April.

The plants are ready to pull when about six inches high. They are removed by holding down the seed potato with one hand and pulling off the sets with the other. After the first crop of sets have been removed a second crop will grow. Johnson Brothers of Wamego, Kan., handle large quantities of seed sweet potatoes. Sweet potatoes can not be successfully grown in high altitudes. They do best in sandy soil and in a rather warm climate.—G. C. W.

Harrowing Rye in Spring.

Can rye sown on rough ground last fall be safely harrowed this spring? I intended to harrow this ground after sowing the rye, but it snowed the night I finished seeding and by the time it was dry enough to harrow the rye was up.—R. F., Montana.

Rye or wheat planted three inches deep which has become well established, will not be pulled out by the ordinary harrow. Our dry farming expert, E. R. Parsons, advocates the spring-tooth harrow or weeder as the safest implement to use for this purpose. The teeth of this weeder are so set as to give and spring back and will dodge around roots of well established plants. An ordinary harrow, however, can usually be used without injuring the plants.

On soil which heaves badly with the frost in the spring, it is not a good plan to harrow a small grain crop until the frost is out of the ground. Later in the season when the stand recovers from the heaving and becomes well rooted it may be harrowed without damage. The time to harrow can be determined only by one who is on the ground and can observe conditions. One object of the harrowing is to break up the crust and form a loose mulch which will help to hold the moisture in the soil through a dry period.—G. C. W.

Hogs Need Salt.

Should cooked potatoes fed to pigs be salted? I am raising some pigs mostly on culled potatoes, using some corn and barley. The pigs are fat, but have not made much of a growth this winter.—L. G., Arizona.

Hogs, like other domestic animals, seem to require a certain amount of salt in their feed. You can supply this either with the feed or separately. Most hog raisers keep a box of salt where the hogs can go to it at will. A tonic mixture known as the government hog remedy has been used by hog men all over the country. It is as follows:

	Pounds.
Wood charcoal	1
Sulphur	1
Sodium chloride (common salt)	2
Sodium bicarbonate	2
Sodium hyposulphite	2
Sodium sulfate	1
Antimony sulfid (black antimony)	1

This mixture can be prepared by any druggist. It can be kept in a box where the hogs have free access to it.—G. C. W.

Seeding Sweet Clover.

How would you proceed to get a stand of sweet clover on twenty acres of sandy grass land? At what time should it be sown and should it be broadcasted or drilled? My whole farm is quite sandy. I have some old ground in rye. How could I seed this to sweet clover? How much seed is required to the acre and what kind is best?—W. F. G., Yuma county, Colo.

Under natural conditions the seed of sweet clover remains in the ground through the winter and germinates early in the spring. Occasionally under favorable moisture conditions a few plants may start in the fall. In farming practice it has been found that it can be seeded successfully at any time from January to the latter part of May.

Sweet clover requires a very thoroughly compacted seed bed. Often failures to get stands on cultivated land is due to having the soil too loose. On sandy grass land probably the best way to get a stand would be to drill in the seed with a press drill. It can be sown broadcast and the seed will gradually be worked into the ground by the alternate freezing and thawing of the early spring months, or it may be covered with a harrow.

The amount of seeds to use depends upon its quality. Sweet clover seed nearly always contains what is spoken of as "hard seed." This has such a hard seed coat that it will not germinate the first season, although it will hold its vitality and grow the next year. A germination test will determine the per cent of seed which will germinate readily, and if more than half the seeds grow in such a test, ten to fifteen pounds to the acre should be enough. If sown broadcast it probably would be well to increase the quantity. What is known as scarified seed is now sold by many seedsmen. This seed has had the seed coats scratched mechanically by a special device which causes the hard seeds to germinate more readily.

If it is desired to get sweet clover started on land now in rye, the seed can be sown broadcast early in the spring, just as eastern farmers sow red clover seed in winter wheat. Ordinarily if it is sown early enough the alternate freezing and thawing will work the seed into the soil so that it will germinate. If seeded in rye the rye should be mowed as hay. In mowing sweet clover for hay the second year it is very important that it be cut high enough to leave a few branches and leaves on each plant. If cut too low at this time, the plants will be killed.

For Colorado conditions the yellow-blossom biennial variety is commonly preferred. It is not quite so large a plant as the white blossom variety, but is less stemmy in its growth and makes better hay.—G. C. W.

VETERINARY ADVICE.

Questions in this department answered by Dr. George H. Glover, head of the Veterinary Department, Colorado Agricultural college.

For Worms in Horses.

Please give me a remedy for expelling worms from horses.—L. E. T., Weld County, Colo.

Give your mare a teaspoonful of pulverized arecanut in her feed every other day. This will doubtless destroy the worms.

Treatment for Mammitis or Garget.

One of our milk cows has a caked teat about once a week. The milk looks like clabber. She calved five months ago.—T. M., Utah.

The cow has mammitis, or garget, which is inflammation of the udder. It is probably caused by infection through the natural opening in the teat. In some cases mammitis is transmitted from one cow to another, probably by the hands of the milker. This appears to be a chronic case and nothing short of injections into the udder, and the use mastitis mixed bacterins will be effective. It may be advisable to quit milking the cow until she is again fresh.—G. W. G.

May Have Bad Teeth.

I have a 10-year old horse in fair condition that has not been well for some time. He seems to lack control of himself when he walks? His kidneys seem in good condition, but his sheath swells.—J. R. P., Gunnison county, Colo.

The swelling of the sheath is in a general way an indication of unthriftiness, but gives us no light as to his actual condition. The horse being 10 years old, the chances are that his teeth are in such condition that he is unable to properly masticate his food. The old aphorism, "No food, no horse," is no more true, and no more important, than "No teeth, no horse." In the evolution of the horse his teeth have not kept pace with his development in other respects. The teeth of most horses are entirely inadequate, and by the time that most horses are 10 years old, they begin to suffer from the effects of bad teeth. This defect surely cannot be ascribed to high living or artificial food. Probably the best thing to do will be to have a veterinarian fix his teeth and give him a month's rest on green grass.—G. W. G.

Remedy for Bloody Milk.

We have a 5-year-old cow which hurt her udder in some unknown way about two years ago. She was milking at the time she got hurt, but afterwards she milked hard in the right front teat. At the time of freshening it was necessary to open the teat with an instrument. The veterinarian said it was best to let that tea go dry, which we did. This is the second time she has freshened since she was hurt and the same trouble appears again. She has been milking about three months and started to give bloody milk from one teat and now it has spread to the other two teats. Would you please tell me what causes this and if there is any cure for it.

This may be due to the old injury. If so, a surgical operation may again be necessary. However, if it is simply inflammation which causes the bloody milk, bathe the udder with vinegar and water or alum solution two or three times daily and give one dram of dried sulphate of iron and three teaspoonfuls of salt in the feed twice a day until bleeding ceases. In old standing cases like this the trouble is often caused by growths in the milk ducts and these cannot be removed by operation, but the cow must be dried off and be allowed to nurse calves.

Tractor Supplements Horses.

We have a 12-25 horse-power tractor, and do not now see how we could farm without it. We bought it when prices were away too high, but labor and farm products were high also, and we had to do the most work with the least man power. This the tractor did to perfection.

We pull three plows in stubble, but only two in breaking alfalfa. Last spring our work came on suddenly, so two of us took turns in running the tractor. One of us would go out just at daybreak and run till about 10:30—then the other would go and run it till the middle of the afternoon, when the other would come and run till dark. We pulled two plows right through our hardest alfalfa field and got our plowing done easier and quicker than we could have done with teams. However, do not think our teams were idle, because they were busy disking, harrowing, drilling and marketing.

In the fall we use the tractor to cut silage, in the winter to grind feed. Of course, the tractor has to be throttled down a great deal as this latter work does not tax its capacity at all, but we think it is more economical to use it than to buy another engine. In doing hard continuous work such as plowing, we find kerosene is much more economical than gasoline, but in putting up our silage and grinding feed, where we sometimes stop for a few miutes waiting for the next load and the work is very light, we use gasoline, as it is about as economical as kerosene, and the engine starts somewhat easier.

I would not advise a farmer with a very small farm to buy a tractor by himself, but get his next-door neighbor to go in with him and the two own it together, that is, providing they can agree. In our neighborhood we are especially fortunate in having farmers who can co-operate and work to each others' interest. Thus two men can have the benefit of a machine when neither could afford one by himself, and one machine could easily do for them both.

Although we had no previous experience in operating tractors, we had no serious difficulty, the main thing being plenty of oil and common sense, and we also asked questions from people who did know how to run them, but would advise against the Smart Aleck. About the first thing we did was to go to the garage man in town and he gave us some very valuable instructions about the care and operation, and when anything goes wrong now that we do not understand, he comes and helps us along.—J. Lewis Halls, Montezuma county, Colo.

Study Instructions Carefully.

The instruction book furnished with a gasoline engine is prepared for use. Save it and study it occasionally. If you failed to get a book of instructions, a request for one should be sent at once to the manufacturer. Some manufacturers may be careless in this matter of instruction books, but they are working against their own interests, for it is a most inexpensive means of assisting purchasers to get satisfactory service from the engine. It is safe to assume that the maker of an engine understands thoroughly its operation and can supply valuable information to the purchaser.

Do not be careless with your instruction book, but preserve it carefully in a place convenient for handy reference when something goes wrong. It is a great deal cheaper to learn how to make simple adjustments than to send for an expert to come out and tell you how to do some little thing which is fully explained in the instruction book.

Keep All Nuts Tight.

In operating a gasoline engine be sure all nuts are kept tight. All engines vibrate to some extent and this vibration tends to loosen nuts and other parts. It takes only a few minutes to go over the engine to see that all nuts and screws are tight, at the same time wiping off any oil or dirt which has collected. This should be done at least once every day the engine is used. Many operating troubles will be avoided by regularly attending to this.

Overhauling the Farm Tractor.

On every farm where a tractor is used there should be a well-equipped shop large enough to get the tractor in and leave room to work. In getting a tractor ready for spring work, the whole motor should be gone over carefully, grinding valves, cleaning, adjusting and oiling bearings, and adding new piston rings if necessary. Necessary repair parts should be ordered at once and put into place as soon as they arrive. If you get your tractor and other farm machinery in first-class condition before the rush is on you will have the satisfaction of being the first out in the field when the soil is in condition to work, while the man who puts it off will have many of these little repair jobs to attend to while he should be plowing. The way to keep a tractor up to a high point of efficiency is to put in the proper amount of work on it at the right time.

Expensive Carelessness.

Many stories of tractor incidents are told by students taking the tractor short course at our agricultural colleges. One man in Nebraska, having had his tractor seven years, decided the magneto needed cleaning. He soaked it in gasoline ,and then turned it to see if it would spark. It did, and set the gasoline on fire and burned the magneto up. Another man heard a fearful noise as the drivewheel turned over. Instead of stopping the tractor he kept it going to see if the noise occurred again. A lug had come loose and the second time around swung out and stripped off one of the control levers and the fender. Positively, a machine should not be run a foot after something has gone wrong. Repair men say that more than 50 per cent of their work comes from improper lubrication.

Hides Now Worth Selling.

During the past two or three months a marked change has taken place in the hide and pelt market. The demand for hides of all kinds is stronger than for many months. Dry hides, especially, are in big demand by the tanners, with good heavy hides netting the shipper from 12 to 15 cents a pound. Cured and green salted heavy hides are moving freely at from 5 to 7 cents, with seconds bringing from 3 to 5 cents. Calf and kip skins are the dullest article, yet are saleable at about 11 cents for No. 1 skins and 8 cents for seconds. Good horse hides move easily at from $1.75 to $2.50 each, according to quality.

The outlook on wool is also most gratifying, and this is probably the strongest item on the list. Fine, clean graded wool bringing as high as 30 cents a pound, with a possibility of it going even higher, while burry and dirty wool is selling at proportionately high prices.

All grades of sheep pelts have a better clearance than for many months. Clean, dry full wool pelts at present range around 15 to 18 cents, with short wools, clips and shearlings in proportion. Green pelts bring from 80 cents to $1.50 each, according to quality.

As the tanners' supply of hides on hand is rather low on account of the dull market during the past couple of years, there is every reason to believe that no immediate drop in the market will occur.

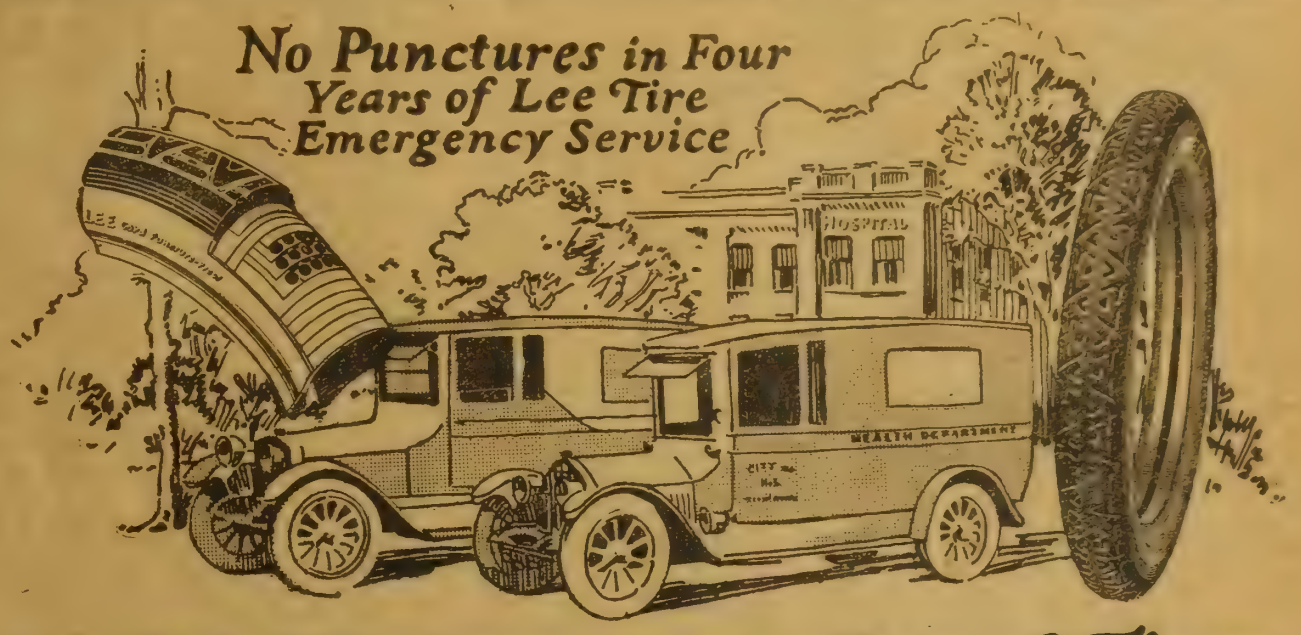
With the market thus inclined the rancher and stockman can cash in on the hides scattered about his premises to good advantage. It is not uncommon for the average ranchers to have from ten to fifteen hides about the place, and as they have been practically worthless for so long a period the number is most likely a good deal more. Now, while the market is on a sound basis, is a good time to ship them to market, and it will also pay you to skin every horse, cow or sheep that dies on your ranch.

Dry hides are divided into two grades, unsalted and dry salted, with the unsalted being the most valuable, while of the green hides those which have been salted bring the most money. Also, the longer they have been salted the more they are worth a pound.

A green hide that is not grubby, or has not been cut in skinning is a No. 1, while grubby or cut hides are classed as seconds. Even a very small cut makes a hide a No. 2. Dry hides are usually bought at a flat price and therefore a cut, unless unusually large, makes but little difference in the value of the hide. All hides, whether green or dry, which are hair-slipped in any spots are classed as glue hides and bring a great deal less money.

It is impossible to give a complete explanation of hide grading in a short article, yet from the brief instructions given the average ranchers can, with a little practice, soon become fairly well experienced in determining hide values.

If you have any hides of any kind laying around the place, or know where you can buy some, get busy and ship them to market for they are actually worth money today. In shipping, green hides should be tied securely in single bundles, while dry hides ship cheaper if several are baled together. Always ship by freight and if the weather is warm do not ship hides which are still green, as there is sometimes a delay in transit which will cause the hides to spoil before being delivered.—Emil C. Wahlstrom.



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The Rural Household

Questions about home problems promptly answered by letter and through the magazine. Letters from women containing helpful suggestions for improvement of rural life are always welcome. Address all communications to Mary G. Collopy, Editor Home Department, Western Farm Life, Denver, Colo.

If We Only Understood.

If we knew the cares and trials,
  Knew the efforts all in vain,
And the bitter disappointment,
  Understood the loss and gain—
Would the grim eternal roughness
  Seem—I wonder—just the same?
Should we help where now we hinder?
  Should we pity where we blame?

Ah! we judge each other harshly,
  Knowing not life's hidden force—
Knowing not the fount of action,
  Is less turbid at its source;
Seeing not amid the evil
  All the golden grains of good;
And we'd love each other better

  If we only understood.
Could we judge all deeds by motives
  That surround each other's lives,
See the naked heart and spirit,
  Know what spur the action gives,
Often we should find it better,
  Purer than we judge we should,
We should love each other better

  If we only understood.
Could we judge all deeds by motives,
  See the good and bad within,
Often we should love the sinner
  All the while we loathe the sin;
Could we know the powers working
  To o'erthrow integrity,
We should judge each others' errors
  With more patient charity.
—Rudyard Kipling.

Our First Letter.

I, for one, say "Come in." I feel just like I have had a caller every time I sit down and read a letter from some of the farm women. I believe this is the way to live, helping one another, telling of the things we do and how to do them. No one knows how these letters help. Only those living on a ranch without any neighbors understand.

I live one mile and a half from neighbors, but am not acquainted with them. Yet, I wonder how some women get lonesome; I never do. I have been on the ranch three years, coming right out of the hotel business, and I have yet to feel lonesome. I have so much to do, I raise chickens and turkeys, I make butter and I raise a garden. I have a six-room house and do all my own work. But I don't want to stay in the house—I go out into the fields and help my husband. Always I can find something to do to take up my mind. During winter months I plan and make things for the children of my two married daughters.

I would be glad to hear of others' plans and means, so we can help one another.

My rooms are all compo-boarded—the living room, kitchen and bed rooms. I would be glad of suggestions for the decorating of them this spring. I have a rosewood bedstead which I want to make into furniture. Would like to have help on this.

Let us know your wants; maybe I can help. I'm somewhat of a carpenter, chore boy, chicken raiser, gardener, nurse, cook, seamstress—in fact, a farm woman.—Mrs. James Archie, Boulder County, Colo.

Mrs. Archie has given you a job. She wants suggestions. Let us know what you think about that rosewood bed. Remember we live each day but once. Let us help others before the day closes.

My Neighbor's Story.

In New York City, in St. Vincent's hospital, on a mattress of concrete, a very capable, and formerly active woman has been lying in a plaster cast for almost two and one-half years. Because her spine is very, very weak, she is obliged to lie in only one position day after day.

What does she do? She laughs! Or rather, she did laugh until last month, when a famous surgeon forbid it because of danger of jolting her injured bones. So now she smiles and jokes so that others may laugh. Hundreds of friends and acquaintances visit her room for the cheer that she gives them.

Plant It This Year.

Are you the woman who has planned, for years, to plant a few trees? Do it this year. Western Farm Life has already given you a list of trees which will grow satisfactorily on non-irrigated land. We no longer question the advisability of planting trees without abundant water supply. Many farm women have already proved that trees adapted to dry land conditions, properly planted, will thrive without excessive irrigation.

Rural Household is very anxious to have stories from you, telling of your success or failures in tree growing. Why did you succeed? Was it worth the effort? What suggestions can you give us? In what ways have your trees repaid you for your trouble? Let us have your letter or card in an early mail, for tree planting time is near at hand.

Have You a Dress Form?

In nearly every magazine of interest to homemakers there is a story of the new and practical paper dress form. Women who are fortunate enough to own a "Betty Jane" gather in groups to tell each other how much easier home dressmaking is with the new dress form to help in fitting.

Those of you who are within reach of home demonstration agents will want to ask for a demonstration in your community if you have not already had one. If you have no extension workers in your county, write to your State Agricultural college for information concerning a demonstration. Then, if you cannot make arrangements, do the next best thing—help yourselves. A new bulletin has just been issued explaining the construction of this simple and inexpensive dress form. Write to the Department of Agriculture, Washington, D. C., asking for Department Circular 207, "The Paper Dress Form." This circular describes all the materials necessary for making the form, and gives each step of the process in detail. Splendid illustrations are included in the circular.

If there are any further questions concerning the dress form, you will not hesitate to ask the editor of Rural Household, will you?

Logan County Dress Forms.

A farmer in Peetz, Colo., wrote the following poem which was given at the first annual banquet of the Peetz Farm Women's Club:

Dress Forms.

Have you heard about the meeting, the
  women held last week?
Down in Jones' district, now some of
  them don't speak.
They met to make those dress forms
  you've heard so much about,
And had the county agent to come out
  and help them out.
Hank Jones' wife said they could use her
  kitchen and front room
To come and bring their paste and glue
  and stay the afternoon.

Those dress forms they are making are
  made right on the dame.
Each buys a shirt or swipes the kid's, to
  make the dress form frame.
They stretch these o'er their corsets;
  then paste them over all
With a thousand yards of paper strips,
  like paper on the wall.

They stand around and laugh and talk,
  with corsets laced up tight,
They can't sit down, but stand around,
  like men stripped for a fight.
They cannot even sit them down to take
  a little rest,
But have to stand around and wait in
  sticky form compressed.

All men are banished from the house
  while forms are being made,
Poor things, they have to stay outside,
  within the barn's dark shade.
But after while the forms are dry and
  made to come off,
They slit them down and shed them like
  a moth.

They stand them all up in a row to study
  and compare,
And that's where the trouble started, be-
  tween the women there.
That Mrs. Brown, whose ample form was
  full a fifty-two
Got sore because her's wasn't neat like
  that of slim Miss Drew.
—Anonymous.

House Cleaning Time.

Keep dirt out of the house by cleaning the walks, steps, porches, and sills regularly and often, by screening windows and doors near the ground, and by insisting on having muddy shoes and coats cleaned or left outside.

Lessen the number of dust-collecting places, such as unnecessary cupboards, grooved and carved woodwork, floors with cracks, rough-finished walls, elaborately carved and upholstered furniture, superfluous draperies, and bric-a-brac.

Remove dirt frequently and systematically. This keeps the house and furnishings in better condition and makes the need of heavy cleaning less frequent.

Clean by taking the dirt away, not by scattering it to settle again elsewhere.

Do heavy cleaning a little at a time

to avoid the hard work and discomforts of the old-fashioned spring and fall housecleaning.

Have a supply of good cleaning tools such as your work calls for and keep them in good order in a convenient place.

Use water and cleaning agents sparingly, because otherwise they may spoil finishes and weaken glue, paste, or cement.

Be on the lookout for troublesome insects and animals and take prompt measures to get rid of them if they appear.

Ask all the family to help by leaving things where they belong and in good condition.

Our Fashion Service.

All patterns 12 cents each. Address Western Farm Life, Pattern Department, 1518 Court Place, Denver, Colo.

Read This Before Ordering: Patterns ordered through this magazine are mailed promptly from the factory at Brooklyn, N. Y., and arrive in 10 to 12 days from time order reaches Western Farm Life. Be sure to specify size and number of patterns. Write your name and postoffice address plainly to avoid delay. These patterns are handled at cost, as a service to our women readers. The price of 12 cents includes postage.

3931—A Pleasing Model for the Little Miss.—The dress with a convenient closing is the one that will best please the little girl who "helps" to get ready for school or play. This model has attractive lines. It lends itself especially well to crepe, linen or repp. The pattern is cut in four sizes, 4, 6, 8 and 10 years. A 6-year size requires 2⅜ yards of 36-inch material. Blue chambrey with motifs in a contrasting color would be good for this design.

3563—A Pleasing Dress Style for School or "Best Wear." This pattern is cut in four sizes, 8, 10, 12 and 14 years. A 12-year size will require 5 yards of 27-inch material. Serge and satin could be here combined, or plaid suiting and serge, checked gingham and chambrey. Embroidery, braid, bands and piping, simple outline stitching and applique would be effective for decoration.

3266—A Becoming Play Dress. Cut in four sizes, 2, 4, 6 and 8 years. A 4-year size will require 3⅜ yards of 27-inch material. Checked gingham, striped seersucker, spotted percale, pongee, poplin, drill, linen and crepe are good materials for this style. As here shown, blue and white gingham is combined with white linene, and tiny frills of the gingham.

3932—A Smart Top Garment. For the cool days of early spring, a coat is ever needful. This garment will appeal to the "little person" because of its comfortable lines and roomy pockets. Wool velours, twill or taffeta could be used for this. As here shown brown velours was used with fancy braid for trimming. The pattern is cut in four sizes, 4, 6, 8 and 10 years. A 10-year size requires 3¼ yard of 44-inch material.

3304-3294-3759—A Jaunty Sports Costume. Black taffeta was selected for the Bolero 3304, white crepe for the Vest 3294, and white flannel for the Skirt 3759. Black pass stitching in chenille ornaments the skirt very effectively. All of the designs comprising this costume may be employed separately. The Vest is fine under a jacket or coat. The Skirt is good in wash goods or cloth and the Jacket is fine for any of this season's material. The skirt is cut in six sizes, 24, 26, 28, 30, 32 and 34 inches waist measure. It requires 2½ yards of 54-inch material for a medium size. The bolero and Vest are cut in four sizes: Small, 32—34; medium, 36—38; large, 40—42; extra large, 44—46 inches bust measure. The Bolero requires 3 yards of 30-inch material. The Vest requires 1⅝ yard of 36-inch material. The width of the skirt at the foot is 2⅝ yards. THREE separate patterns are required for this costume.

3719—An Attractive and Comfortable Apron. Cut in four sizes: Small, 34—36; medium, 38—40; large, 42—44; extra large, 46—48 inches bust measure. A medium size requires 5¼ yards of 27-inch material. Gingham could be used for this, or seersucker, lawn, drill, percale, sateen and alpaca.

3928—Popular Style With New Features. Here we have the "basque waist" with new versions. The youthful lines of this style are just what slender figures require. Taffeta, crepe weaves and voile are good for its development. The pattern is cut in three sizes, 16, 18 and 20 years. A 16-year size will require 4½ yards of 36-inch material. The width of the skirt at the foot is about 2 yards.

3929—A Popular Style. With a dress as becoming and neat looking as this one, work will speed rapidly. The lines are comportable and pleasing. Gingham or percale with facings of white will develop nicely in this model. The pattern is cut in seven sizes, 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires 6⅛ yards of 36-inch material. The sleeve may be finished in wrist or elbow length. The width of the skirt at the foot is 2 yards.

From the Nation's Capital.

(Continued from Page 9.)

tion of the Federal Farm Loan Investment Corporation, for the purpose of managing the bond selling operations of the Federal Farm Loan Board. The land banks would sell their bonds cooperatively through the investment corporation.

At the hearings on these bills, Judge Lobdell, chairman of the Federal Farm Loan Board, said it took less than a week to sell the recent $75,000,000 issue of Farm Loan bonds, and they are now above par. He also stated that the board had in mind an early offering of another issue of Farm Loan bonds. Several banks are requesting local associations not to send in any more applications for loans until they can take care of applications now on file.

::::

Highway Bills Under Consideration.—Two highway bills are being considered by the House committee on roads. One, introduced by Rrepresentative Woodruff of Michigan, calls for an appropriation for the fiscal year ending June 20, 1923, of $50,000,000; for the next year, $60,000,000; and for the next $75,000,000. It continues the 50-50 Federal and state arrangement with $20,000 maximum Federal aid per mile. The other bill, introduced by Congressman Dunn of New York, would appropriate $40,000,000, $50,000,000 and $60,000,000 for the next three years respectively, and cuts the Federal appropriation to 25 per cent of the cost of the $7,500 per mile.

The State Highway commissioners and American Farm Bureau Federation are in favor of the Woodruff bill. William C. Markham of Kansas, representing these organizations, pointed out the necessity for appropriating beyond the one-year period if the work of highway construction is to be handled economically and expeditiously.

::::

Bill to Extend Time of Payment of Water Charges.—The McNary bill, authorizing the Secretary of the Interior, in his discretion, to extend for two years from next December the time for payment of construction and water charges on Federal irrigation projects, has passed the Senate.

If any considerable amount of winter wheat has failed and must be abandoned, why not plan for a reasonable acreage of summer fallow for next year's wheat?

Our Offer to Farmers

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You farmers in the Rocky Mountain region know these two papers, and we want each and every one of you to read one or the other of them. We are making a special limited offer good for thirty days from the date on the coupon below.

If within the next thirty days you send us your subscription for six months, with the remittance, we will make you a present of a full-colored 3-sheet auto route map, showing on one sheet in detail all auto and railroad routes and towns in Colorado. On another sheet a map of the United States, and on the third sheet a world map and map of Central Europe. On the back of each sheet is shown latest census figures.

Sheets are 36 inches in length by 30 inches top to bottom, metal bound at top with hangers. This map will be mailed you free by parcel post the day your subscription is received.

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Enclosed find $..... for which you may send me The Rocky Mountain News (with) (without) Sunday, for six months, or
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Frantz's Famous Winter-Laying Leghorns

500 Pullets Laid 22,660 Eggs *In November December January*

(While other breeds and strains were boarding free.)

We sold the eggs on the market for $1,400 and produced them with $250 worth of feeds. $1,150 Profit in 3 Months. They Will Do the Same for You, as they have done for Thousands and Thousands of others.

Mrs. Kelly McEndoffer, Denver, sold $2,100 worth of eggs from 325 pullets in one year.

A. V. Brooks, California, gave our stock a trial last year. It proved more than good, and this season he wired for 7,200 hatching eggs.

A Kansas City man sold $75 worth of eggs daily in winter from less than 2,000 pullets; feed cost per day, $20.

E. Lambuth, Canon City, also sold $2 200 worth of **winter eggs** from 750 pullets in 4 months.

J. L. Safeblade, Illinois, gathered 246 eggs in December from 12 pullets.

We have more than proven our claims, and if you want the WINTER EGGS AND BIG PROFITS you MUST HAVE FRANTZ'S WINTER LAYING LEGHORNS. RESULTS ARE CERTAIN when purchased direct from us. GUARANTEED FERTILE HATCHING EGGS and 50,000 STRONG CHICKS alive at your door at prices you are SURE to make big profits. Come and see us. Write

Osee C. Frantz, Box F, Rocky Ford, Colo.

ANCONAS for Profit

The fellow who wears the BROADEST SMILE and the BIGGEST BANK ROLL now-adays is the ANCONA MAN. Never before has there been so many folks taking up POULTRY as a BUSINESS PROPOSITION, and the CENTER of INTEREST is the S. C. ANCONA—the greatest business hen ever known.

Don't take our word for it, we invite you to do as many others are doing, TRY THEM OUT with any other breed on earth. No matter what fowl you are now breeding, TRY S. C. ANCONAS BESIDES THEM and be convinced just as we were a few years ago that S. C. ANCONA is the BIGGEST LITTLE MONEY MAKER of the age.

THE PUBLIC WANTS THEM—Are you in a position to supply the demand in your territory? If not, write us. We will mail you our free catalogue, giving you valuable information concerning the breed, our methods, and our strain of trap-nested and pedigreed Anconas—the

Leading Exhibition Strain of the West

JUST WON AT THE NATIONAL WESTERN—First cock, first hen, first, second and third cockerels, and first and second pullets. No pens entered.

Our strain is bred for EGGS by the only reliable method—the TRAP NEST.

BABY CHICKS AND HATCHING EGGS in any quantity, at PRE-WAR PRICES. We can sell you QUALITY chicks, as low as most hatcheries sell chicks from bought-up market eggs of unknown quality. Book orders at once, and avoid being disappointed.

Great Western Poultry Farm

Box F. Rocky Ford, Colo.

TOWNSEND FARM

Formerly Mountain View Poultry Farm

HATCHING EGGS

From our superior flock of S. C. R. I. Reds, White Plymouth Rocks and S. C. Buff Orpingtons. Order early to assure yourself of prompt delivery. Prices furnished upon application.

STOCK FOR SALE.

PHONE LAKEWOOD 75. EDGEWATER, COLO.

Directly west and adjoining Lakewood Country Club.

LOWER'S POULTRY FARM

ARVADA, COLORADO.

Has developed a strain of all-year laying Single Comb Rhode Island Reds that will help your motherse and put you in the way of making money with poultry. **Descriptive Booklet on Request.**

STOCK, EGGS FOR HATCHING, BABY CHICKS.

BABY CHICKS AND HATCHING EGGS

From Merk's Famous Strain of S. C. White Leghorns, that have the laying habit bred into them through years of patient selecting and careful mating, and have the vitality to maintain it. Send for circular and price list. We guarantee to please you and our prices will surprise you.

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Reduced Prices on Hatching Eggs and Baby Chicks

FROM SUNRISE S. C. WHITE LEGHORNS, THE KIND THAT LAYS THE WINTER EGGS.

[illegible] have changed circular with original price list, please note the 25% reduction: [illegible] $1.25; 50 $2.50; 100, $4.75; 500, $67.50; 100% live delivery guaranteed. [illegible] EGGS, 15, $1.25; 50, $3.75; 100, $6.75; 500, $30. 90% fertility guaranteed. [illegible] get our circular for further information regarding our stock, etc. Please book orders early. F. W. Stanbridge & Son.

SUNRISE POULTRY FARM, ROCKY FORD, COLO. R. R. 3.

Profitable Farm Poultry

W. E. VAPLON.

Questions about the farm flock promptly answered by letter. Free advice on all phases of poultry production. Address all inquiries to Poultry Department, Western Farm Life, Denver, Colorado.

There never will be too many good poultrymen, therefore strive to be among the best.

In considering the breed of chickens best suited for a home flock it is a safe plan to pay little attention to varieties which are not of local importance. Better stick to those which have proved their adaptation except on the advise of experts.

Boys and girls should be encouraged to start in the poultry business. It requires little money to make a start and the current expenditure may be reduced by using the home wastes. If the project begins with a laying flock the returns begin early.

Experience has proven that it does not pay to put too many eggs under a setting hen. Being anxious to get as many early chicks as possible, the breeder often puts fifteen eggs under a hen. It takes a large hen to cover fifteen eggs, and the nest is often too small for that number of eggs, with the result that several are broken. The remaining eggs are smeared and the result is a poor hatch.

Unless the premises where chicks are kept and all appliances are known to be free from lice and mites, and it is certain the chickens have never been exposed to them, it is a wise precaution to spray or paint the brooder with a mixture of four parts crude petroleum or other thick oil and one part kerosene, allowing it to dry thoroughly before using. Puffs of insect powder on the chicks when in the brooder, about once a week, will destroy any lice that may be on them.

Have the Brooder Ready.

Buyers of chicks should have a brooder such as is required for the number of chicks bought, ready, warmed and regulated when the chicks arrive.

If for any reason the brooder is not ready, take the chicks from the shipping box in a warm room, feed and return to the box; repeat it at intervals of three hours until the brooder is ready.

For the first few days give very close attention to regulating the brooder for the comfort of the chicks. This is the most troublesome thing in the operation of a brooder, and the most critical period in the life of the chick.

Rabbits Eat Their Young.

What causes rabbits to eat their young? I have one young doe that has had three litters and eaten two of them. I feed bran, oats, alfalfa hay, sugar beets and occasionally potatoes, and they have all the water they want.—Mrs. J. B. P., Mesa county, Colo.

Perhaps you are not supplying your rabbits with salt. Lack of salt in their diet will sometimes cause them to eat their young. Place a small lump of rock salt where they have free access to it. Feed and supply houses usually have lumps of salt specially prepared for this purpose.—G. C. W.

Floor Space for Hens.

How many hens can be kept without crowding in a house 12x46 feet? This house is fitted with dropping boards, leaving all the floor space available for scratching.—Mrs. E. K. F., Cheyenne county, Colo.

It is generally considered that a poultry house should provide from three to five square feet of floor space to the hen. In view of the fact that your hens are confined to the house in stormy weather only, this house probably would accommodate as many as 150 hens without overcrowding.—G. C. W.

Plan for Emergency Brooder.

Delay in delivery of a brooder sometimes puts a novice in a quandary as to what to do with chicks. A brooder for temporary use may be made as follows:

Take a box, without cover, about 18 to 24 inches square and 10 inches high. In one side, next the bottom, cut an opening 3 inches high by 10 inches long for the chicks to pass through. Protect this opening with a strip of cloth, tacked at the upper edge, having perpendicular slits from the lower edge to within half an inch of the top to give the chicks passage.

This box, covered on top with a piece of old blanket or quilt, may be used without heat when the outside temperature is 70 degrees or over. For lower temperature a jug or a large bottle of hot water should be placed in the box and refilled as often as necessary to keep the chicks comfortable.

Feeding Newly Hatched Chicks.

A newly hatched chick dose not require food until it is from 48 to 72 hours old. It is important to understand this point fully. The yolk which is only partly used as food during the incubation period, is drawn into the abdomen just before the chick emerges from the shell. The yolk furnishes sufficient nourishment to keep the chick alive for a number of days. This factor is what makes it possible to ship chicks long distances.

Feeding the chick too soon after hatching results in disarrangement of the digestive tract and retards the normal absorption of the yolk. It thus remains unabsorbed in the body of the chick and finally causes its death.

All the chick needs when removed from the incubator or the nest is clean, fresh water, from which the chill has been removed. The young chick drinks a great deal of water and plenty of it is necessary for its health and development. Also provide grit—sand—and charcoal (chick size), for it to pick at. These ingredients start the digestive tract and digestive juices to functioning so that they will be in better condition to digest the first food eaten. Lusty chirping indicates that it is time for the first feeding. The first food should be of an easily digested nature. Oatmeal, dry bread crumbs, or a mash mixture of ground feeds, make very good starting foods.—O. C. Ufford, C. A. C., Fort Collins.

Purebreds Return Good Profits.

An old frame hen house, board floor, no glass windows, old wooden box coop for little chickens, an incubator and a flock of 100 purebred Buff Orpington hens and pullets and three roosters constituted my equipment when I started in to make some money in the poultry business. Summing up the return for a year shows $84 from sale of baby chicks, $77 from eggs, spring chickens $65, a total of $227. I count this as return for labor, assuming that the eggs and poultry used in the home and increase in flock pay for feed and other expense.

In January and February I gathered 1,735 eggs, not many, but the weather was bad and I had no scratch shed. I started the incubator March 12 with 168 eggs, and four hens with fifty-two eggs. March was windy and changeable, and the incubator was in a drafty room. The hens were snowed under and the nests got wet. My hatch was ninety-four—incubator sixty-seven and hens twenty-seven— but I lost only four of them and the pullets of this hatch began to lay in October.

I started the incubator again April 6 and set more hens, selling the day-old chicks at 20 cents apiece, and continued to hatch up to July 12, selling the day-old chicks or keeping them where the hatch was more than my orders. In all I sold 420 day-old chicks My neighbors came to me for the chicks. at 20 cents apiece. My sales were local. Besides the ones I sold I had over 200 to raise. I bought 150 hatching eggs to introduce new blood in my flock, costing with express $13.65. All other eggs set were from my flock. We used eggs freely for the table with a family of ten, besides extras—threshers, silo fillers, etc., and ate a great many chickens.

I like an incubator. I find it runs more satisfactorily in an airy cellar. I set hens the same date as incubator and use the hens to brood, giving each hen thirty-five to forty chickens, according to the time of year. I use alfalfa chaff in the coops. Alfalfa chaff and grits are all the baby chicks have to pick at till they are two or three days old. Then for a week I feed toasted stale graham bread run through a food chopper and mixed with a little hard-boiled yolk of egg. I feed sparingly five times a day and keep sour milk before them all the time.

The first ten days is the most important period of the life of a baby chick. Keep them dry and warm, with an

abundance of fresh air and little feed, and you will start them right.

I don't use commercial chick feed, for the ranch supplies a good variety of better and fresher grain. When 10 days old the chicks may be fed cracked wheat and corn and twice a day a mash of sour milk, bran and corn meal, or better, a fresh baked bread of sour milk, graham flour, bran and corn meal, with soda to lighten. Molasses is a good addition to this. Fresh sour milk or water should be before the chicks at all times.

For the flock in winter be sure to supply abundance of water and green feed. Alfalfa chaff and beets are good, sour milk, or sweet milk, not both. Fresh jack rabbit meat is as good or better than meat scrap. Feed grain generously, but avoid feeding too much corn. Give grits and shell.

Comfortable quarters, fresh air, fresh water, and a variety of feed, keeps the flock healthy and insures winter eggs. —Jessie Deming, Elbert county, Colo.

Watch Your Brooder.

Chilling kills baby chicks. They must be free to go to a warm place whenever they desire. Bad results from chilling are among the most common troubles with which a poultry raiser has to contend. What is often thought to be white diarrhea is nothing more than a diarrhea resulting from the chicks becoming chilled. Chicks chilled at some time early in their development keep dropping off even after attaining considerable size. Watch the old mother hen and her chicks on a cold day. You will notice that she hovers them frequently. The baby chick must have access to warmth at all times.

As the chick grows older the temperature of the brooder can gradually be lowered. However, to prevent crowding and piling in corners some heat should be provided nights, or during chilly weather, until the chicks are fairly well feathered and start to roosting.

Feeds for Starting Chickens.

Commercial chick feeds, providing they contain clean feedstuffs, are reasonably free from weed seeds, dirt and too much millet, may be used for baby chicks when it is not convenient for the poultry raiser to mix his own feed. The following starting mash, scratch feed, and method of feeding are being used and recommended by the poultry department of the Colorado Agricultural college:

For scratch feed—Finely cracked corn with meal removed, 60 pounds; cracked wheat, 40 pounds. Corn chop can be secured and sifted and the fine corn meal put in the mash, the fine cracked corn used for the chick scratch feed, and the coarse cracked corn used for older chickens.

For a mash mixture or starting feed, use fine corn meal, 45 pounds; bran, 20 pounds; shorts, 20 pounds; meat meal—fine—10 pounds, and bone meal, 5 pounds,

Feed the mash mixture on a clean board or paper in small amounts at frequent intervals during the first few days. Sprinkle a little scratch feed over the mash until the chicks learn to eat it, when it should be fed in a clean litter of straw, alfalfa leaves or grass. When the chicks are a week to ten days old the dry mash can be kept before them at all times.

The Cause of White Diarrhea

White Diarrhea is caused by the bacillus Bacterium Pullorum transmitted through the yolk. There is scarcely a hatch without some infected chicks. The germs multiply very rapidly and one infected chick may infect the entire brood. The germs can be killed by the use of preventives. Intestinal Antiseptics to kill the germs should be given as soon as the chicks are out of the shell. It is much easier to prevent than it is to cure.

How to Prevent White Diarrhea

Dear Sir: Last spring my first incubator chicks when but a few days old began to die by the dozens with White Diarrhea. I tried different remedies and was about discouraged. Finally, I sent 50c to the Walker Remedy Co., Dept. 353, Waterloo, Ia., for a box of their Walko White Diarrhea Remedy. It's just the only thing for this terrible disease. We never lost a single chick after the first dose. We raised 700 thrifty, healthy chicks, where before we never raised more than 100 a year. I'd be glad indeed to have others know of this wonderful remedy Ethel Rhoades, Shenandoah, Ia.

Don't Wait

Don't wait until White Diarrhea gets half or two-thirds your chicks. Don't let it get started. Be prepared. Write today. Let us prove to you that Walko will prevent White Diarrhea. Send 50c for box on our guarantee—money back if not satisfied. Walker Remedy Co., Dept. 353, Waterloo, Ia.—Advt.

Success With Ducks.

About eight years ago I became very much interested in ducks. Buff Orpington ducks, the kind I wanted, were scarce in the west, so I ordered a drake and four ducks from an eastern breeder, paying twenty-five dollars and express charges. This seemed a big price, as Pekin and ordinary Runner ducks could be purchased at one dollar a piece.

The ducks arrived in December. One of them was too lame to walk and was badly bruised and died in about a week. I believe she was injured in transit as it was a long trip.

The drake was a good one and weighed about eight pounds, although not fat. Two of the ducks had long broad bodies and weighed nearly as much as the drake, while the other duck was short in body and weighed only about half as much as the other ducks. We placed them in a small yard with a piano box for a shelter and also fixed up some low nest boxes. They started to lay during January.

I discovered that the two big ducks laid a large, long, white egg, and the other duck a smaller round egg. The large ducks laid nearly every day and the small one about every two or three days. As I wanted to build up a heavy laying strain I set only eggs laid by the big ducks. I began to set the eggs in March and continued until May.

I raised more than seventy and they were a fine sight as they swam on the pond or roamed over the fields in quest of insects. They were equal if not superior to turkeys in hunting bugs, in fact, they would catch the insects in the water, on land and grub around in the soil for them. They do not require a pond or stream of water, but like the small boy they thoroughly enjoy it.

I cleared about twenty-five dollars from the sale of hatching eggs the first season, which was my original investment.

One very good feature about ducks is that they are not troubled with lice or mites. This saves a great deal of labor. Another favorable point is that they do not require much in the way of housing, in fact, they can live under a barn floor or low shed during stormy weather. They are very gentle and always come home to roost.—Mrs. Fred Sieglinger, Oklahoma.

Started in a Small Way.

About twenty-five years ago I started with one setting of purebred eggs which I obtained from a neighbor. I hatched from them three cockerels and nine pullets, raising all of them. Two of the cockerels I sold for good prices and kept all of the pullets. The remaining cockerel I traded for a very choice one and disposed of all my mongrels, so I had nothing on the place except purebreds.

The next summer I raised a fine flock and that was the beginning of my success with poultry. Every succeeding year I would sell my cockerels for good prices and keep my best hens, always introducing new blood each season with pureblood cockerels. Sometimes I would sell two and three hundred dollars' worth of cockerels for breeders and eggs for hatching from my farm flock.

Yes, I had a good incubator and run it for a good many years, taking off three and four hundred chickens in a season, always retaining the best for breeders. I always start my baby chicks on a good grade of commercial chick feed, feeding that until they are old enough to eat cracked corn, which is not very long. The best remedy I ever found for white diarrhea in baby chicks is permanganate of potash. Make their drinking water purple with it. I always have preferred setting a few hens the same time I set the incubator, for there is no brooder equal to the old mother hen. What I have done any one can do, for I never had anything but poor equipment. An ordinary chicken house with a few old barrels and boxes usually was my turn-out on a rented farm.

I do not run an incubator or try to raise chickens on an extensive scale any more, for my age and health will not permit, but I am sure there is money in it for those who are able to work. There is nothing on the farm that will pay better than purebred poultry.—Josephine Joslyn, Wyoming.

No one can raise poultry and produce eggs at so low a cost as the farmer.

S. C. W. LEGHORNS

A WINTER-LAYING STRAIN

247 TO 288 EGG BLOOD. HATCHING EGGS, $9.00 PER 100; CHICKS, $20.00 PER 100, PREPAID TO YOUR DOOR. SAFE ARRIVAL GUARANTEED.

You can order direct from this ad with perfect safety that you will get a SQUARE DEAL. Order now—save time. Every egg and chick we ship comes from our own carefully selected breeding stock produced right here on THE FOWLER EGG FARM. No bought up junk, eggs or chicks, handled by us in any way. You will pay a cent or two more per egg or chick for our stock than for the common hatchery chicks, but you get from us a REAL WINTER LAYING STRAIN of Leghorns; a strain that will make you money right from the start.

Mr. Hayball, a customer in Idaho, writes: "172 pullets raised from your eggs have averaged me $4.75 PER DAY for November and December—60 PER CENT DAILY EGG YIELD."

Don't think such a record possible with any other strain of Leghorns. To do this you must have the FOWLER EGG FARM BRED-TO-LAY LEGHORNS. Send us your order today without delay. You will never regret it.

Illustrated Catalog mailed free to those who really mean business. Let us know your wants. Address

FOWLER EGG FARM, Route 1-B, Fowler, Colo.

BABY CHICKS
Or Eggs for Hatching

LARGEST HATCHERY AND POULTRY FARM IN WESTERN COLORADO.

INCUBATOR CAPACITY 15,000 EGGS.

1,200 laying hens, thoroughbred S. C. W. Leghorns, Ferris strain, from trap-nested hens with records of 265 to 300 eggs per year. February 1st have already booked orders for 14,000 chicks for early delivery. Get your orders in if you want them filled on time. **Prices:. 18c each for March and April; 16c for May and June. F. O. B. Fruita. Eggs $1.50 per setting of 15, or $7.50 per hundred.**

FAIRLAWN POULTRY FARM

FRUITA, COLORADO

Blakeland Farms' Quality Leghorns

SPECIAL SALE—To make room for Baby Chicks: For $25 we will ship 12 fine exhibition S. C. White Leghorn Hoganized Pullets mated with fine male. Order before they are gone.

24 BLAKELAND BUSINESS LEGHORNS LAID 4,804 EGGS IN 365 DAYS.

These eggs sold for $191.92, or $8.33 average per bird. Our best record pullet last year laid 292 eggs. The foundation for such a business can not be bought for a song. Our prices are reasonable. BLAKELAND STANDS FOR QUALITY FIRST, LAST AND ALWAYS. Write for Catalog B.

Blakeland Farms, ON COLORADO SPRINGS ROAD **Littleton, Colo.**

Come In and Get a Copy of this Big FREE Poultry Book

We want every poultry raiser in this vicinity to have a copy of DARLING'S new poultry book. Written by a former Government expert, it tells all about the feeding methods of famous poultry men and how they use

DARLING'S MEAT CRISPS

to increase their poultry profits. It tells how to make your hens lay all winter long. How to start the pullets laying early. How to produce fertile eggs for hatching. How to make your chicks grow bigger and faster. Come in and get your copy of this valuable book today —it's free.

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S. C. White Leghorns

413 [illegible] laying hens up 18,177 [illegible] per cent in three months. Day-old chicks, $20.00 per [illegible]. Hatching eggs, $4.00 per 100.

THE ORDWAY POULTRY FARM

Jacob Senkbeil. Ordway, Colo.

Baby Chicks

NEW LOW PRICES SEASON 1922

MILLER BABY CHICKS ARE BEST FOR HEAVY EGG PRODUCTION

Customers report pullets lay all winter. 20 varieties to select from. 1,000,000 chicks via prepaid parcel post safe delivery guaranteed. Pleased customers in every state. 19th season. Catalog FREE.

MILLER POULTRY FARMS
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POULTRY

PLYMOUTH ROCKS.

PURE BARRED ROCKS, $2.50; EGGS, $1 SETting; $5, 100. Ida Ham, Burden, Kan.

PARTRIDGE ROCK COCKERELS FROM MADison Square Garden winners. Cora De France, Berthoud, Colo.

BARRED ROCK COCKERELS—THOMPSON'S imperial "Ringlet" strain, $5. Mrs. J. A. Graham, Ransom, Kan.

RINGLET BARRED ROCKS, LARGE, VIGOROUS, beautifully marked, cockerels $2 and $3; pullets. Mrs. Gill, Piedmont, Kan.

FOR SALE—WHITE PLYMOUTH ROCKS; cockerels and setting eggs; prices reasonable. F. L. Toliver Stock Farm, Fort Collins, Colo.

BARRED PLYMOUTH ROCKS, BRED FROM trap-nested heavy laying stock; winners in public contest. John Tobias, Wheatridge, Colo.

BARRED ROCKS, RINGLETS; 84 PREMIUMS, 34 firsts. Cockerels, $3, $5, $7.50. Eggs, 15, $3; 30, $5. Mattie A. Gillespie, Clay Center, Kan.

HAVE FEW CHOICE WHITE COCKERELS LEFT, $2 to $4 each. Eggs $1.50 per setting of fifteen. Quality Fruit & Poultry Farm, Manzanola, Colo.

PURE THOMPSON'S IMPERIAL RINGLET DARK cockerels; grand breeders, show birds. Eggs $3, $5 setting. Mrs. Robert Simmons, Severy, Kans.

RINGLET STRAIN BARRED ROCKS, 25 YEARS exclusively, cockerels with egg capacity, also several choice cock birds. Geo. Drinnin, Columbus, Neb.

WHITE ROCKS, LINE BRED, HOGAN TESTED, winners at Kansas State Show. Choice cockerels, $5; satisfaction guaranteed. Albert Heit, Parsons, Kan.

BARRED ROCK COCKERELS, CHICKS. RINGlet exhibition and trapnest strain. Record to 299, over 100 premiums. Eggs, 15, $2; 100, $8. A. G. Hammond, Vinland, Kan.

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RICKSECKER SINGLE COMB REDS, TOPPERS; cockerels, $6. Eggs, $1.50 per 15; $3.50 per 50. A. L. Wylie, Clay Center, Kan.

ROSE COMB REDS FROM THE BEST BREEDing, heavy layers; pen 1, 15 eggs $3.50; pen 2, 15 eggs, $2.50. J. F. Williams, Branson, Colo.

SINGLE COMB REDS, STATE SHOW AND CENtral Nebraska winners. Eggs, exhibition matings, 15, $3.50, $5; flock, 15, $2; 100, $8. Cockerels. Feemster, York, Neb.

JUNE PRIOBS IN APRIL ON ALL EGGS FROM my finest Rose Comb Reds, $1 to $2 per 15, or $7 per 100. Also all my breeding stock for sale. Big Sacrifice. E. J. White, 1229 17th St., Denver, Colo.

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RHODE ISLAND RED FARM—EXCLUSIVE breeders of thoroughbred Single Comb Rhode Island Red baby chicks and hatching eggs. Some fine cockerels for sale. All stock sold on a money-back guarantee. We are now booking orders for May and June delivery and can accept a few more for the latter part of April. Try Oregon Reds. Send for catalog. Rhode Island Red Farm, Rt. 6, Box 202, Portland, Ore.

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BUFF ORPINGTON COCKERELS—TOOK FIRST prize pen at Grand Junction, $8.50 to $5 each, 15 eggs $3. J. R. Thomas, Eagle, Colo.

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[illegible] WHITE WYANDOTTE COCKERELS, [illegible] individuals for pens; some good stock for [illegible] Sale, $2 to $5 while they last. E. [illegible] Strohm, Rt. 2, Wamego, Kan.

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EXTRA GOOD SINGLE COMB ANCONA COCKerels, $2 each. Eggs, 15 for $2, or $6.50 per 100. Barred Rock eggs the same. Julia Ditto, Newton, Kan. Route 7.

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LEGHORNS.

ANCONA EGGS, 6c EACH. FLEDA JENKINS, Jewell, Kan.

BUFF LEGHORN EGGS, $1 SETTING, $5 HUNdred. B. S. Broun, Lingle, Wyo.

WILSON'S BUFF LEGHORNS, 297 EGG-BRED winners. Write for mating list. Herb Wilson, Holton, Kan.

SINGLE COMB BROWN LEGHORN COCKERELS, $2; eggs, $6 100; baby chicks, $12 100. Mrs. A. Kamps, Harvard, Neb.

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Best strains, farm raised, good stuff. You need pay high prices no more. If you wish chicks as soon as possible send the money. 6c lb. above station price for your cream. Ship eggs, cream, poultry, to us at Denver. Send chick orders direct to Fort Morgan. J. A. Tracy, Poultryman, Fort Morgan, Colo.

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CHICKS—FROM BIGBONED ROSE COMB RED, Hogan tested, heavy layers, 16c prepaid. Mrs. Alex Leitch, Parkerville, Kan.

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S. C. WHITE LEGHORN BABY CHICKS, 16c, postpaid and safe arrival guaranteed—from my own stock, strong, healthy, and good layers. Terms, 25% with order, balance before shipping. Order early to get chicks on date when wanted. Ivar Johnson, Fremont, Neb.

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PUREBRED BABY CHICKS—PRICES ARE down; Barred White and Buff Rocks, S. C. and R. C. Reds, White Wyandottes, Buff Orpingtons, S. C. Black Minorcas, $16 per 100; S. C. White Leghorns and Anconas, $15 per 100; prepaid parcel post. Kansas Poultry Co., Norton, Kans.

BUFF LEGHORN BABY CHICKS—MY TWELVE years' experience with the Buffs has fully demonstrated to my entire satisfaction that they are just what I call them—Best Layers on Earth. Get in on a good thing and try them. You will never regret it. Champney's Poultry Yards, 2057 So. Broadway, Denver.

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PURE BLACK LANGSHAN EGGS, PREPAID. Mary McCaul, Elk City, Kan.

BUFF ORPINGTON EGGS, 105, $6; CHICKS, 15c. L. J. Clamin, Jewell, Kan.

R. C. REDS—EGGS, 105, $5; CHICKS, 14c—Linnie Clamin, Jewell, Kan.

SILVER WYANDOTTES—15 EGGS, $1.50, POSTpaid. L. D. Bailey, Girard, Kan.

"RINGLET" BARRED ROCK EGGS, 100, $6. Mrs. Lynn Bailey, Lyndon, Kan.

PUREBRED WHITE LANGSHAN EGGS, $6—Mrs. Allan Smith, Sterling, Kan.

BARRED ROCK EGGS FOR HATCHING, $4.50 hundred. Roy Black, Pauline, Neb.

S. C. WHITE LEGHORN EGGS, $5 PER 100. Vernon Carlson, Rt. 1, Boulder, Colo.

CHOICE ROSE COMB BROWN LEGHORN EGGS, 5c each. Mrs. Ed Kelley, Dunlap, Kan.

PUREBRED ROSE BROWN LEGHORN EGGS, $8; chicks, $15. James Sedlock, Ord, Neb.

PRIZE WINNING S. C. BROWN LEGHORN EGGS $4 100. Roy Cooper, Cortland, Neb.

ROSE COMB REDS, BRED LAYERS; EGGS, 15, $1.25; 30, $2. Ada Hopper, Branson, Colo.

S. C. WHITE LEGHORN CHICKS, 12c; EGGS, $4.50 per 100. Clanin Hatchery, Jewell, Kan.

EGGS—PUREBRED LIGHT BRAHMA, 15, $1.50; 50, $4; 100, $7. Mrs. Grace Buskirk, Pender, Neb.

BARRED ROCK EGGS—WINNING, LAYING strain; mating list. Sylvan Miller, Humboldt, Kan.

DARK, BRILLIANT R. C. REDS, BRED LAYERS, chicks, $16; eggs, $6, 100. Charles Sigle, Lucas, Kan.

S. C. WHITE LEGHORNS—EGGS, 15, $1.50; 100, $6. Baby chicks, 100, $16. W. L. Stokesberry, LaJunta, Colo.

BUFF ROCKS—EGGS, $1.50, 15; $4, 50; $7, 100. Chicks, $18 per 100. Della Wood, Milan, Kan.

BARRED PLYMOUTH ROCK EGGS FOR HATCHing, $1 per setting of 15. Mrs. C. J. Davidson, Fort Lupton, Colo.

BARRONS, THOROUGHBRED, HOGANIZED S. C. White Leghorn chicks, $15; eggs, $5 100. Charles Sigle, Lucas, Kan.

ROSECOMB BROWN LEGHORN; WHITE ROCK eggs; State fair winners, $1.50, 15; $7, 100. Mrs. John Heins, Gresham, Neb.

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EGGS FROM QUALITY SINGLE COMB WHITE Leghorns, 100, $7 postpaid. Satisfaction guaranteed. Dave Baker, Conway Springs, Kan.

PUREBRED BLACK LANGSHANS THAT WEIGH, lay and pay; chicks, 18c; eggs, 15, $1.25; 100, $6, prepaid. Daisy King, Solomon, Kan.

BUFF ORPINGTON HEAVY LAYING AND EXhibition strain; egg price reduced. Write me. C. H. Drage, 675 W. 3rd St., Loveland, Colo.

FOR SALE—BABY CHICKS, HATCHING EGGS, from high egg producing S. C. W. Leghorns. E. C. Wilkinson, Rt. 2, Fort Morgan, Colo.

EGGS—PUREBRED GOLDEN LACED WYANdotte, 15, $1.50; 30, $2.75; 50, $4.50; 100, $7. Mrs. Nellie Evans, Oakdale, Neb.

SINGLE COMB DARK BROWN LEGHORN EGGS; tested flock; "Everlay" sires; $5.50, 100, postpaid. Mrs. Harvey Crabb, Bucklin, Kan.

PUREBRED BARRED ROCK EGGS FOR HATCHing, $1 for 15, $6 for 100. Also special pen eggs, baby chicks. R. D. Mutz, Fowler, Colo.

EXCELLENT LAYING STRAIN EGGS; LIGHT Brahmas, Barred Rocks, S. C. Reds. Summerfield & Skinner, 3817 W. 23rd, Denver, Colo.

LET US FILL YOUR ORDER FOR BABY chicks and eggs, 13c and up. R. C. Reds. Creech & Sons Hatchery, Central City, Neb.

EGGS FOR HATCHING—ROSE COMB RHODE Island Reds, culled for better layers; $1 per 15; $5 per 100. W. D. Davies, Shawnee, Wyo.

EGGS—SINGLE COMB WHITE LEGHORNS, 90% fertility guaranteed; $8 per 100. Request catalog. H. M. Wells, Box 297-T, Auburn, Neb.

WHITE WYANDOTTE EGGS, LARGE, VIGOROus birds from heavy laying strain, $7 per 100; 80% fertility guaranteed. George Guthrie, Exeter, Neb.

PUREBRED BUFF LEGHORN EGGS, SETTING of 15, $1; also Toulouse goose eggs, 40c each. F. Rauchfuss, R. F. D., Edgewater, Colo. Phone Lakewood 102.

BARRED ROCK EGGS, LAYING, WEIGHING strain, $7 per 100; $4, 50; $1.50 setting. Baby chicks, $15 100. Mrs. H. N. Cooke, Cottonwood Falls, Kan.

FOR SALE—EGGS FOR HATCHING; SEVERAL fine strains. Write us for prices and information. Wiswall's Poultry Yards, 1300 Willow St., Trinidad, Colo.

LARGE SINGLE COMB WHITE LEGHORNS—Winter layers; hatching eggs, $6 per 100. Baby chicks, $12 per 100, postpaid. Westwood Farm, Waco, Neb.

EGGS FOR HATCHING FROM OUR HOGANIZED flock of dark Single Comb Reds; pens, $5 a setting; flock, $7 per 100. The James Sisters, Olathe, Kan.

PUREBRED BARRON WHITE LEGHORNS—Write quantity eggs needed. Will quote prices accordingly. Cannon Ball Poultry Farm, Mullinville, Kan.

ENGLISH TOM BARRON S. C. WHITE LEGhorns; flock headed by cockerels of 288—304 egg strain; 100 eggs, $5. Mrs. Henry Wegman, Jr., R. 4, Sabetha, Kan.

WINTER LAY SINGLE COMB DARK BROWN Leghorns; chicks, 12½c each. Eggs, $5 per 100, prepaid; safe delivery guaranteed. Mrs. Ralph Griffith, Rogersville, Mo.

EGGS FOR HATCHING—ROSE COMB RHODE Island Reds exclusively; prize winning, heavy laying strain; five pens mated. Write for mating list. E. A. Miller, Alma, Neb.

COLUMBIAN WYANDOTTE EGGS FOR HATCHing from Shenandoah show winners; heavy layers, $1.50 per 15; $3.75 per 50; $6.50 per 100; postpaid. N. S. Henshaw, Shenandoah, Iowa.

HARRISON'S EXHIBITION EGG STRAINS; SINgle and Rose Comb Reds. Breeding stock, eggs for hatching; baby chicks. Get Red Breeders' Bulletin. Harrison Red Farms, College View, Neb.

QUALITY WINTER LAYING S. C. W. LEGHORN baby chicks and hatching eggs, by prepaid parcel post. Safe arrival guaranteed. Mating list free. Brenna Poultry Farms, Rt. 3, Wayne, Neb.

ROSE COMB BROWN LEGHORN EGGS, EXTRA selected heavy producing stock; Hoganized 5 years; flock headed by sons of 254-egg pedigreed male. $2 for 15; $4.50, 50; $8, 100. J. M. Billingsley, Lexington, Neb.

"RYAN'S" SINGLE COMB DARK BROWN LEGhorns; best blood lines; Hoganized; satisfactory shipments guaranteed. Eggs, $5.50, chicks, $13 per 100, prepaid. Ryan's Poultry Farm, Centralia, Kan.

EGGS AND BABY CHICKS.

BUFF ORPINGTON EGGS AND BABY CHICKS from our heavy laying and exhibition strain. Also Ancona and S. C. Rhode Island Reds, eggs from exhibition stock. Roup & Son, 979 Carroll Ave., Ames, Iowa.

PUREBRED DARK BROWN R. C. LEGHORN hatching eggs, $6 per 100. Also baby chicks after March 1, $13 per 100. Hogan tested stock. Booking orders now. Mrs. Arthur Henkle, Route 1, LeRoy, Kan.

GOODWIN'S BIG TYPE S. C. WHITE LEGhorns, winners in Utility Class at Colorado State fair and Canon City show. Baby chicks, hatching eggs. Write for catalogue. W. W. Goodwin, Route 2, Canon City, Colo.

S. C. WHITE LEGHORNS, STANDARD QUALity; the best winter layers. Hatching eggs and day-old chicks from yearling hens on free range. Prices reasonable. Book your order early. Willow Creek Poultry Farm, Box 657, Lamar, Colo.

BARRED PLYMOUTH ROCK EGGS FOR HATCHing, from pens both light and dark, $3 for 15 and $5 for 30; from flock, $5 per 100 and $1 for 15. Some of the best birds I have ever had in these pens and flocks. Chester Blunt, Rt. 1, Greeley, Colo.

BARRED ROCK EGGS—THOMPSON'S "RINGlets," heavy laying strain. Dark, narrow barred to the skin. Flock, $2 for 15; $6, 50; $10, 100. Special matings, $5 for 15; prepaid. Arthur Waechter, Yuma, Colo.

EGGS—PUREBRED BARRED ROCKS, WHITE Leghorns, Buff Orpingtons, Rhode Island Reds, Silver Laced Wyandottes, $1, 15; $1.75, 30, $5, 100, postpaid. Chicks, 15c postpaid; guaranteed alive. Alfred Young, Wakefield, Kan.

WARREN'S QUALITY WHITE ROCKS, FISHEL strain direct, winners of firsts and sweepstakes for five years in Jewell county. Breeding stock carefully selected, "eggs" and "baby chicks" for sale. Warren's Eclipso Poultry Farm, Mankato, Kans.

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TURKEYS.

FOR SALE—EIGHT MAMMOTH BRONZE MALE turkeys, $8 each, F. O. B. Wiggins. The Nile Farms, Wiggins, Colo.

MAMMOTH BRONZE TOMS, 30 TO 35 LBS., $15; 15-lb. pullets, unrelated; reduction on trio. Toulouse goose eggs, 50c. Mrs. P. J. Meng, Keenesburg, Colo.

BRONZE TURKEYS, NATIONAL WESTERN AND Heart of America winners; eggs, 50c, 75c, $1 and $1.50 each. Poults $1 and up. Cora De France, Berthoud, Colo.

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WORLD'S BEST INCUBATORS, BROODERS and other poultry supplies. Write for descriptive circular. Rodney Walno, Ames, Kan.

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HATCHING SERVICE INCLUDED IN EVERY sale. Charters Incubator Company has appointed the Romoco Poultry Farm of Littleton, Colo., state agents for Charters Incubators and Charters Regulator. Fill once a week, trim once a week. Charters Manufacturing Co., Santa Cruz, Calif.

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BUY YOUR CIGARS DIRECT; 50 LA CALUMNAS prepaid, $1.75. Agents wanted. Havana Smokehouse, Homeland, Ga.

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INVENTIONS WANTED—CASH OR ROYALTY for ideas. Adam Fisher Mfg. Co., Dept. 264, St. Louis, Mo.

RECORD YOUR INVENTION—SEND FOR FREE Booklet. Blank Form. Send sketch or model for free opinion as to patentable nature. C. L. Parker & Co., 754 F. Leader Bldg., Washington, D. C.

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HONEY—PURE EXTRACTED, 10 LBS. $2, EXpaid inside 600 miles. J. P. Lindahl, Greeley, Colo.

"THEBESTO ROCKY MOUNTAIN HONEY," none better; satisfaction guaranteed or money back; five-pound can, postpaid $1.50. Send remittance with order. Write for price on large quantities. The Colorado Honey Producers Association, Denver, Colo.

Large Areas Reforested.

Over 4,000 acres of denuded and treeless lands within the National forests of Colorado, Wyoming, Nebraska, Minnesota and Michigan were reforested during 1921. About 800 acres on the north slope of Pikes Peak were planted. That region was devastated by fire sixty years ago, early settlers claim, and nothing but scrub growth has ever come in. This is a portion of the Colorado Springs watershed and residents of that city are particularly interested in the project, because forested hillsides mean purer water and more of it, at the time of year when most needed.

Fifty acres were planted on an old burn on the Holy Cross forest near the famous mountain of the same name. The rangers on the Gunnison forest established a number of experimental plots under different conditions in the North Fork of the Gunnison river in order to determine the best methods of reforesting this region. Years ago this watershed had one of the finest forests in the state, and old settlers say that it was burned off, even before their time, by the Indians, in order to improve the hunting. Nothing now covers these slopes but brush and aspen.

In Colorado, Engelmann spruce and Douglas fir are the principal trees that are planted, the last named species being considered especially valuable for railroad ties as well as lumber.

In the Medicine Bow forest, west of Laramie, about 150 acres were reseeded to lodgepole pine on the Turpine Creek burn of 1915. This fire was so severe that it destroyed all the trees as well as the seed. Instead of planting trees, seed was sown directly on the ground with a seeder, similar to the kind used in sowing alfalfa. The method of direct sowing has been successful with lodgepole pine, but for other species it is necessary to plant the little trees raised at nurseries. About 300 acres of this burn were sowed to seed in 1919 and this portion now nas an average stand of 1,200 seedlings per acre.

In the sand hills of Nebraska, 431 acres were planted to western yellow end jack pine. Ten sections have now been planted on this unique forest, which rivals the forests started in Napoleon's time in the maritime pine region in France. Napoleon started the French people to planting trees on the sand dunes of southern France, and the magnificent forest of over a million acres which resulted supplied much of the lumber used by the Allied Armies during the recent war.

The 4,214 acres of denuded land that were planted by the Forest Service last year should produce, in 75 to 100 years, about fifty million board feet of lumber—sufficient to build about 5,500 five-room frame houses.

Five carloads of hogs shipped from one point in northern Weld county since February 1 brought the growers $10.-000. These hogs were produced [illegible] land farms. Many dry-land [illegible] are looking for more brood [illegible] breeding all they have.

ASPIRIN

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Warning! Unless you see the name "Bayer" on package or on tablets you are not getting genuine Aspirin prescribed by physicians for twenty-one years and proved safe by millions. Take Aspirin only as told in the Bayer package for Colds, Headache, Neuralgia, Rheumatism, Earache, Toothache, Lumbago and for Pain. Handy tin boxes of twelve Bayer Tablets of Aspirin cost few cents. Druggists also sell larger packages. Aspirin is the trade mark of Bayer Manufacture of Monoaceticacidester of Salicylicacid.

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Regulation Army Officers Dress Shoes	$4.75
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BREEDERS' DEPARTMENT,
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Denver, Colo.

Colorado Taxes Increase Rapidly.

The amount of direct taxes paid per capita in Colorado is increasing steadily and rather rapidly, according to figures compiled by the State Immigration department from the records of the State Tax commission. These figures show that the total of state, county, municipal and school taxes assessed in the state in 1920 amounted to $41.95 per capita, compared with $35.44 per capita in 1919. Figures for 1921 are not yet available, but such advance information as is available indicate that there was a further increase in levies and in per capita payments.

The increase shown in 1920 over the previous year were due chiefly to increases in the school levies and in the general county levies. The state levy for 1920 was the same as for 1919—3.47 mills. The total average levy for 1920, including state, county, municipal and school levies, was 24.74 mills, according to the calculations of the Tax commission, compared with 22.21 mills in 1919, or an average increase of about 2.5 mills.

The per capita expenditures for both years are based upon the population announced by the census bureau for January 1, 1920. This makes the apparent increase in per capita taxes slightly higher than the real increase, for the reason that the population in 1919 was undoubtedly slightly below that of 1920, so that the real per capita tax expenditures for 1919 were slightly higher than those here given.

All agricultural counties show considerable increases in per capita taxes and some of them show very high increases. Only ten counties in the state show decreases, all of these except one—Grand—are mining counties. Most of the important mining counties show slight decreases in per capita tax levies or else show very light increases. As a general thing per capita taxes have in the past been higher in the mining counties than in the agricultural counties, due in many cases to very high municipal levies and to high levies in a few cases to pay off county bonds. Average per capita tax assessments for 1920 range from $25.17 in Baca county to more than $80 in Summit county. Average levies vary from 14.08 mills in Jackson county to 38 mills in Teller county. Only three counties show decreases in school levies for the year and these decreases are very small.

Market Outlook for Farm and Ranch Products.

(Continued from Page 4).

wheat afloat for British ports has increased, the total is not a large one when measured by the records of the past, and is only sufficient to supply requirements for a short period of time. Germany has been the most conspicuous buyer during the last week, and is already purchasing for shipment from the new crop because of the attractive discounts on the July and September deliveries. She is buying some wheat for immediate shipment also. France is expecting to buy about 12,000,000 bushels, Italian needs have not been fully supplied, and Greece is expected to be in the market again within two weeks. With the large United Kingdom wants still to be supplied as well as other importing countries it is impossible to show any sizeable margin in the world's supply over probable requirements.

Crop reports from the Southwest are favorable for the most part as they show vast improvement over conditions a month ago. But it is still too early to form views upon the outcome as a good deal of wheat which received a poor start may not yield satisfactorily even though it may show up fairly well for a while. Northwestern Kansas also failed to receive much moisture.

The domestic flour trade is picking up a little and mills have been more active buyers at Chicago, Minneapolis and Kansas City. At the latter point the visible supply of wheat is the largest on record, but has shown a large decrease during the past week.

Primary receipts are falling off and are expected to average lighter during the remainder of the crop year. This will necessitate drawing upon the visible supply and reducing the load the market is now carrying in this form.

Corn Receipts Falling Off.

Primary receipts of corn have declined about as expected and are now running the lightest since early December, when the new crop first began to move freely. Demand from most domestic sources is slow and expert sales have declined during the last few weeks, but industries are buying enough to take care of the receipts, so that the visible supply which is now 48,000,000 bushels, and the largest known in the annals of the trade, is believed to be at its maximum. The trend of corn prices depends largely on what transpires in the wheat market.

Oats Sales Are Disappointing.

Notwithstanding the limited distribution of oats during the last eight months, the movement from primary markets into consumptive channels has not increased as much as expected. Producers are not selling so rapidly as a few weeks ago, but receipts at primaries are still fairly generous and the visible supply has not been cut down a great deal. Small quantities are being sold for export, but unless the total demand increases materially there will be no acute shortage of this grain.

Cash Grain Markets.

The range of cash grain prices follow:

Kansas City—Wheat: No. 3 red, $1.24@1.29; No. 2 hard, $1.20½@1.52; No. 3, $1.20@1.49; No. 4, $1.15@1.35.

Corn—No. 2 mixed, 52@54½c; No. 2 yellow, 53½@56½c; No. 4, 52@55c.

Oats—No. 3 white, 35½@36½c; No. 4, 35@35½c.

Barley, 50@56c.

Hay Receipts Remain Light.

Receipts of hay at the leading distributing markets are still light, but are adequate to supply the trade at most points. Demand for better grades of timothy and alfalfa is satisfactory, but other grades are difficult to move. Some of the surplus sections report that their supplies have been disposed of, while others still have large reserves for sale. In the South, pasture is already becoming available and is reducing the demand from that section. Rains in Kansas and Oklahoma have vastly improved the prospect for the next crop.

Kansas City—Prairie upland No. 1, $11@12.50; No. 2, $9@10.50; midland No. 1, $6.50@8.50. Alfalfa, choice $24@25.50; No. 1, $22@23.50; standard, $18.50@21.50; No. 2, $15@18; No. 1 timothy, $15.50; No. 2, $12@13.50; No. 1 light clover mixed, $15@15.50; No. 1 clover mixed, $12.50@14.50. Straw, $7@8.

Egg Market is Stable.

Egg prices have held within a narrow range during the past week and sentiment is developing that the spring decline is about over. About 20 per cent of the receipts at the four leading cities is going into cold storage. Market receipts may increase sharply again and depress prices still further, but such declines should prove short-lived, and storage operators feel that they are safe in taking hold. Receipts of dressed poultry at the four largest cities since January 1 have been 43,848,000 pounds, compared with 42,403,000 pounds in the same period of last year.

Latest Quotations: Denver—Eggs, 19@22. Live Poultry—Hens, 25c; springs, 38c; roosters, 15c. Geese, 30c. Ducks, 30@35c.

Demand for Butter Broadens.

Although the supply of butter at Chicago, New York, Boston and Philadelphia was slightly larger than in the preceding week, and considerably larger than the corresponding week a year ago, consuming demand has enlarged and prices advanced at all four points. Nor was the improved demand confined to the large cities, but seemed to be general all over the United States. The larger manufacturers report an increase in the make of butter, but many creameries are shipping less to the larger markets, as local needs are taking a large share of the product. Receipts at the larger markets have not decreased but the small increase has been less than the increase in the make would lead one to expect.

Besides absorbing liberal receipts of fresh butter, large quantities are being withdrawn from cold storage and there is a possibility that the remaining supply of cold storage will not hold out until additional increases in production are large enough to supply the entire trade with fresh butter. It is probable that prices have advanced nearly the limit, but as long as butter disappears at the present rate, the market will be on fairly solid footing.

Prices for 92 score fresh butter on March 18 were: Chicago, 39c; New York, 40c; Boston, 40c; Philadelphia, 39½c.

Potato Shipments Heavy.

Potato shipments from the producing sections were heavy again last week and the market declined. The movement is at the rate of about 5,000 cars per week. Total shipments for the season have amounted to 185,810 cars, compared with 164,648 cars to the same date last year. A few cars of new potatoes are already coming forward from Florida. Northern round white stock is quoted at $1.40@1.47 per hundred pound sack f. o. b. shipping points; $1.65@1.75 in the Chicago carlot market, and $1.90@2 at other points.

Bean Market Still on Up-Grade.

The general trend of the bean market still appears to be upward. Choice hand-picked white stock, f. o. b. Michigan shipping points, was quoted at $7.25 per 100 pounds early in the week, but eased slightly to $7@7.10 at the close. Red Kidney beans were quoted at $8. The supply is being well cleaned up and reserves are not expected to last through June. Consuming demand has been good.

Colorado pintos are quoted at $6.25 to $6.50 per 100 pounds f. o. b. shipping points, while California whites are $6 to $7.25, and limas $9 to $10.

Some beans are still being sold for export, although it is certain that imports will be necessary later on to supply the trade.

News of the Farm Bureaus.

(Continued from Page 8.)

change was held, at which some or all of the commission men were present, and "Agreed upon and adopted a policy or common plan to hamper, obstruct and prevent, by coercion or intimidation," the order buyers and dealers from making any purchases from the Farmers' Livestock Commission Company.

The hearing will be held either by the Secretary of Agriculture or his accredited representative. If the complaints are sustained, orders to "cease and desist" will be issued which, if violated, will subject the offenders to fine and further proceedings in United States Court.

—o—

National Publicity for Your County.—The Chicago office has made arrangements for the distribution of farm bureau stories to over 10,000 newspapers all over the United States. There is demand for this material and in order to meet the demand, the newspapers are anxious to get first hand stories from the states. Now is the time for us to cash in on this opportunity. "Long Distance Co-Operation" has been sent in from this office and readily approved; others are to follow. The Chicago office wants at least four stories a month. Write up your outstanding farm bureau activity, or outline it, giving history, results, etc., and send in to this office regularly. They demand co-operative marketing, educational and county accomplishments now, with pictures. Be sure to send the pictures.

—o—

News Letter Discontinued.—It has been necessary to discontinue the Colorado Farm Bureau News Letter, as very few counties have paid in any dues to the State office for 1922. In fact, all activities will have to be suspended until some of the outstanding bills can be paid.

Recent Range of Livestock Prices at Our Principal Markets.

Cattle—	Denver.	Kansas City.	Omaha.
Choice and prime heavy steers (1100 lb. up)		$8.15@ 9.00	$8.00@ 9.00
Good heavy steers		7.40@ 8.30	7.25@ 8.25
Medium heavy steers	6.75@ 7.50	6.90@ 7.50	6.75@ 7.50
Common heavy steers	5.75@ 6.75	6.25@ 7.10	6.25@ 7.00
Choice & prime light steers (1100 lb. down)		7.90@ 8.90	8.00@ 9.00
Good light steers		7.25@ 8.15	7.25@ 8.25
Medium light steers	6.50@ 7.40	6.85@ 7.40	6.75@ 7.50
Common light steers	5.50@ 6.50	6.00@ 7.00	6.25@ 7.00
Common to choice butcher heifers	4.25@ 6.50	4.75@ 7.35	4.75@ 7.25
Common to choice butcher cows	4.00@ 5.75	4.35@ 6.15	4.25@ 6.50
Bologna and beef bulls	2.50@ 4.25	3.25@ 5.25	3.25@ 5.25
Canners and cutters, cows and heifers	2.00@ 3.50	2.75@ 4.35	2.75@ 4.25
Canner Steers	3.00@ 4.00	3.25@ 4.00	3.50@ 4.25
Medium to choice light veals	8.00@ 10.00	6.00@ 9.50	7.50@ 9.25
Common to choice heavy veals	3.50@ 8.00	3.00@ 7.75	5.00@ 7.75
Common to choice feeders (1000 lb. up)	5.25@ 7.10	5.75@ 7.75	5.75@ 7.60
Common to choice feeders (750—1000 lb.)	5.00@ 6.75	5.65@ 7.75	5.50@ 7.50
Common to choice stocker steers	4.00@ 6.50	4.75@ 7.60	5.00@ 7.75
Common to choice stocker cows and heifers		3.75@ 6.25	4.00@ 6.00
Hogs—			
Top of Market	$ 10.00	$ 10.50	$ 10.15
Bulk of Sales	9.00@ 9.90	9.40@ 10.30	9.15@ 10.00
Heavy (250 lb. up)	8.50@ 9.75	9.25@ 10.20	9.10@ 9.85
Medium (200—250 lbs.)	9.00@ 10.00	9.65@ 10.30	9.20@ 10.00
Light (150—200 lb.)	9.00@ 9.90	9.60@ 10.50	9.10@ 10.15
Light lights (130—150 lbs.)		9.30@ 10.50	9.25@ 10.00
Smooth packing sows (250 lb. up)	8.00@ 8.50	8.25@ 9.25	8.00@ 9.00
Rough packing sows (200 lbs. up)	7.50@ 8.00	8.00@ 8.75	7.50@ 8.25
Medium to choice pigs (130 lb. down)	8.00@ 9.00		
Stock pigs		8.25@ 9.85	9.50@10.00

Dairying and Hog Raising

All letters regarding commercial and technical features of dairy farming and hog production promptly answered. Address all communications to Dairy Department, Western Farm Life, Denver, Colorado.

Colorado is barely able to supply milk and butter for its own people, but has the pasture and feed to supply three times its own population. The San Luis valley has adopted a new slogan for its farms, "Twelve Cows and Twenty Sows." Think what it would mean to any country if every farmer would milk twelve cows and keep twenty brood sows in addition to his regular farming.

Massachusetts, Rhode Island, Pennsylvania, Delaware, Connecticut, New York, New Jersey and Maryland import 83 per cent of their butter. These eight states have a population of thirty million, or nearly one-third of the population of the United States. They get their butter or a large part of it from Wisconsin, Minnesota, Iowa, Kansas, Nebraska, North Dakota and South Dakota, the seven heaviest creamery butter producing and exporting states. These states produce enough for home consumption and a large part of the supply required by these heavy consuming states of the east.

Boy Succeeds With Hogs.

What I know about hog raising I have learned in the pig club work and from my father, who is a Duroc Jersey breeder. I want to learn all I can so that when I am grown I can raise hogs successfully and profitably. I have only purebred hogs, as I think it pays to raise only purebreds. I started out three years ago with a purebred sow pig and sold her pigs last year for breeding purposes. She raised seven pigs, three sows and four boars. I sold the sows at weaning time for $10 a piece and the boars brought me from $15 to $25 each.

This year my sow raised eight pigs, six sows and two boars. I sold one at market price because she was not quite up to standard in type. My father says' "Don't keep any for breeding that are not up to the standard." I have five dandy sows and two fine boars. I will sell the boars, but will keep all the sows for breeding stock. I always feed my sows well before she farrows, but very lightly at farrowing time and give her extra care, so that the pigs will not be stunted. It does not pay to stunt them. The main thing is to feed a balanced ration and plenty of protein feeds to make bone and muscle. Plenty of skimmed milk is good for this, but if milk cannot be obtained they should be fed tankage along with the other feeds.

I think it is best if the hogs can run on pasture, but if they can't they should be fed green stuff or alfalfa hay. I think it pays to raise two litters a year, farrowed in March and September. The pigs can be sold when about five or six months old and should be of good size by this time if they have been kept growing. It also does not pay to stunt the pigs and keep them till they are a year and a half or two years old before selling them, when they could be put on the market when six months old.

The faster a hog can be made to grow the more money there is in it. I keep a record of all feeds my hogs eat and know just what it costs me to produce pork. This year, I produced pork cheaper than last year.

My sow farrowed on July 15 this year and I began my record May 1. From that time until December 15 I had produced 1,072 pounds of pork at a total cost of $19.83, or 18 cents a pound, including cost of grain, hay, pasture, milk, etc., and still have my sow and seven pigs, which are worth quite a bit either at market price or for breeding stock.

In selecting breeding stock, one should be very careful to select only the best pigs, those with good heavy bone, not weak in the pasterns, plenty of daylight beneath, a good arched back, long roomy body, full heart girth, smooth head and shoulders; the hams should be as large if not larger than the shoulders, as the hams are the highest-priced meat. A hog should have fine smooth hair and be smoothly built.

Don't keep any for breeding that are not up to the standard. In this way one can breed up a fine herd. The most economical way to feed hogs is with a self-feeder and they can have all they want without wasting any feed. They should have plenty of pure water. A neighbor asked me the other day: "Don't it take a lot of feed to keep the hogs in such good condition?" If you never let a hog or pig get poor and stunted it doesn't take much to keep them in good shape and they will put dollars in your pocket by growing and growing and growing.

A number of people ship hogs that are a year and a half old that do not weigh any more than pigs should at six months. That is where they lose money on hogs.—Glen Middagh, Saguache county, Colo.

Dairy Council Report.

A report showing some of the achievements of the National Dairy Council for 1921 can be obtained by writing the Council office at 910 S. Michigan Ave., Chicago. The object of this organization is to promote human welfare and national efficiency by developing the dairy industry and increasing the consumption of milk and its products through united and co-operative effort. This little twelve-page pamphlet gives abundance of evidence that the Council is proving itself a worthy organization which every man engaged in the dairy industry can well afford to support.

Grinding Grain for Milk Cows.

It usually pays to grind grain for milk cows. A cow giving milk must be regarded as a working animal and grinding the grain saves her from expending any of her own energy in doing this work. In tests recently made at the Iowa experiment station it was found that ground corn will produce enough more milk to more than pay for the cost of grinding. The ground corn produced 7 per cent more milk and 17 per cent more butterfat than ear corn. Where corn-and-cob meal was compared with corn meal it was found that the corn meal was slightly in the lead, making a 2 per cent better butterfat production.

Colorado Accredited Herds.

Three Colorado herds were given tuberculin tests under the Federal supervision plan in January, 198 animals being tested, with fifteen reactors. There are seventeen herds under Federal supervision in the state, including 795 animals. Four herds have passed the first test. There is at present only one herd in the state on the fully accredited list. The January report shows thirty-one herds, comprising 1,987 animals, on the waiting list. The Federal inspector in charge of the tuberculosis eradication work in Colorado is Dr. W. E. Howe, who works in co-operation with Dr. Charles G. Lamb, State Veterinarian.

Wisconsin leads in number of accredited herds with 1,455. Wyoming has 1,606 herds under Federal control, 1,350 have passed the first test. Thirty herds were tested in January. Kansas to the east has 299 herds on the accredited list and 152 herds were tested in January. There are 12.157 accredited herds in the United States, and a total of 143,449 under supervision.

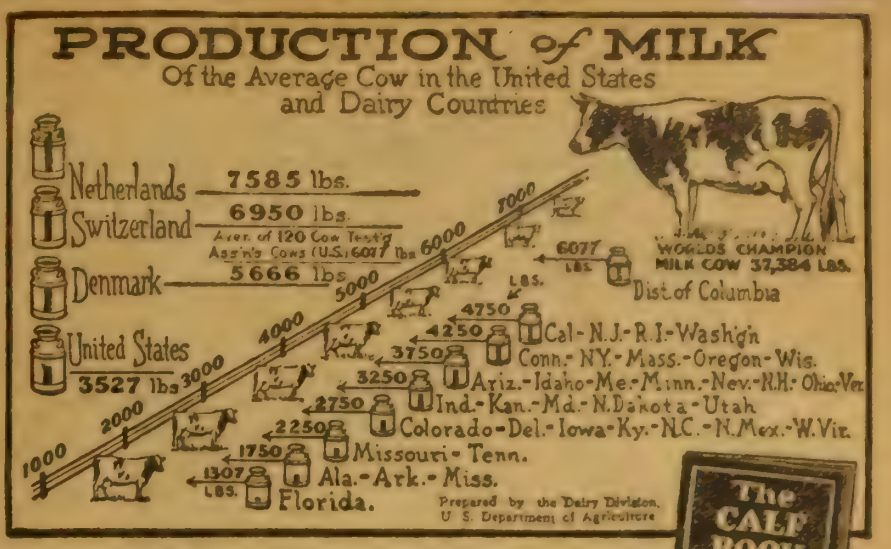
Colorado Milk Cows Rank High.

In the January report of forty-four cow testing associations in the western division, the herd of the Green Mountain Dairy, Lamar, Colo., ranks fourth; Whowell & Polly's herd at Johnstown, Colo., ninth, and Ward Kemp's herd, at Denver, Colo., sixteenth, in best herd average of more than fifteen cows.

In herds of fifteen cows and under, the herd of Marcus Harper, Boulder, Colo., ranks first; Ray Gilbert's at Lamar, Colo., second; Crowley & Letford's herd, Milliken, tenth. Ray Gilbert's herd has held second place for three consecutive months.

Colorado holds third place in average fat produced per cow in the nine western states. Utah leads this month.

Out of 17,791 cows tested in the nine western states, Little Pet, grade Holstein, owned by C. W. Henry, Johnstown, Colo., holds first place; Leota Pontiac De Kol, registered Holstein, owned by the Model Dairy, Holly, Colo., third; Mercedes, Holstein, owned by John Kramer, Brighton, Colo., nineteenth; and Ismay, registered Holstein, owned by Marcus Harper, Boulder, Colo., thirty-second. Ismay held fifteenth place out of 17,600 cows last month.



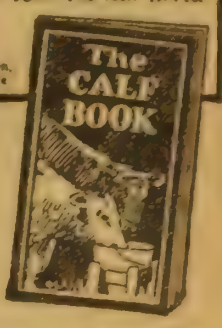
Not More Cows—But Better Cows

Compare the average yearly milk production in the United States, of 3,527 lbs. per cow, with that of other countries shown above. You will see at a glance that one of the greatest means of increasing dairy profits is in obtaining better cows.

The cheapest and best way of getting better cows is to raise them. Use a good bull, keep the best calves from your best cows and raise them on De Laval skim-milk, which is a splendid feed when properly fed. In this way you can improve your herd at very little cost.

A De Laval Separator is valued chiefly because it separates cream—a cash crop—better, quicker, cheaper and without waste. But of almost equal importance is the skim-milk it gives, which will replace your present cows with better cows; or as Pren Moore of the University of Idaho says, "when fed to laying hens will bring you as much money as the original butter-fat;" while it is without equal for growing pigs.

Milk, butter, eggs, poultry and pork, the best paying crops—a De Laval helps make them possible and more profitable.



FREE! This little booklet tells you how to raise fine calves on De Laval separated skim-milk. It is simple and practical. Sent free on request to your nearest De Laval office.

The De Laval Separator Company

New York, 165 Broadway — Chicago, 29 E. Madison Street — San Francisco, 61 Beale Street

The original cream separator. Over 2,500,000 in daily use; about as many as all the rest combined. Has won 1,091 grand and first prizes at every important exposition. Skims cleaner, turns easier and lasts longer than any other. The world's standard. Pays for itself. Sold on easy terms. See your De Laval Agent or write for information.

Sooner or later you will use a

De Laval

Cream Separator and Milker

Banks Finance Dairymen.

There is no better credit risk than a well established dairy farmer. Eighty head of milk cows and a registered bull were recently distributed at Keenesburg, Colo., as the result of a plan for financing the purchase of dairy cows for farmers of that section, worked out by one of the banks. It is the first installment of 500 head of Holsteins to be brought in. The cows are being purchased in the state, many of them around Denver. They are being allotted to farmers without any initial cash payment. As soon as they reach production a portion of each month's cream check is to be applied on the loan at the bank under a long time payment plan.

Cow Testing Increases.

Fifteen years ago a small group of farmers in Michigan entered upon what many of them probably considered a very doubtful experiment, it was the organization of an association for testing their cows, in respect to how much feed they ate and how much milk they gave; an association such as the farmers of Denmark had originated about ten years before, and which various other European countries had copied.

The experiment proved a success and now the number of such associations has grown from one to 542. It is notable that some states which took up the idea at an early date have stuck to the movement and organized more and more associations, while others continue with only a few.

The lack of testers during the war caused a setback to the movement, but recovery from this has taken place, and the number of associations in the country is now much larger than it was before the war.

Advantages of Bull Associations.

The herd of tomorrow is largely a matter of the herd bull used. Poor bulls decrease production and good ones may double or even treble the production of the future herd. Co-operation in the ownership of good bulls has solved the problem of the ownership of really high class bulls for a good many dairy farmers. This is done through the

$24.95 Upward American CREAM SEPARATOR

On trial. Easy running easily cleaned. Skims warm or cold milk. Different from picture which shows larger capacity machines. Get our plan of easy **MONTHLY PAYMENTS** and handsome free catalog. Whether dairy is large or small, write today.

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destroys lice, ticks and all vermin. Will not freeze—keeps indefinitely. Makes any strength solution you need. Gives you more for your money as you pay nothing for bottles, barrels or cans. No freight to pay on factory water. No leakage, no breakage. Easily shipped anywhere. Put up in 5 lb. package divided into 150 cubes—enough for 150 gallons of strong solution. Ask your dealer for Tarx. Write for free book and money saving prices. Agents wanted.

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I want to try Tarx. Send me the free sample. I have ..... cattle, ... horses, ... sheep, ... hogs ..... poultry
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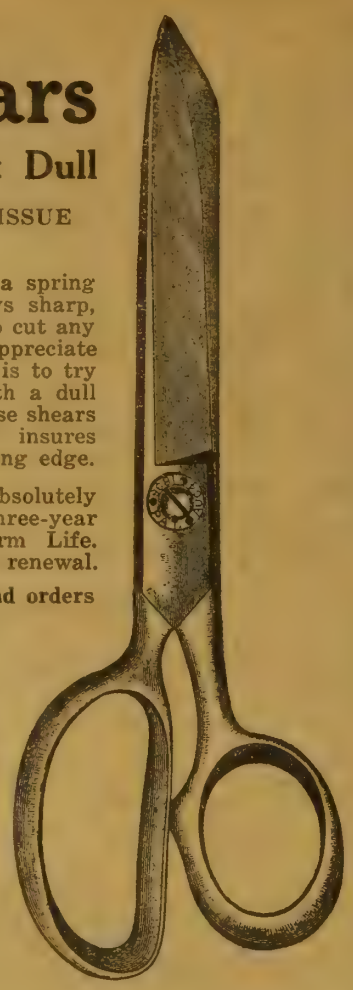
The Kind That Don't Get Dull

WILL CUT ANYTHING FROM WET TISSUE TO THE HEAVIEST CLOTH.

This high-grade shear is equipped with a spring tension attachment that keeps them always sharp, and also makes it possible to adjust them to cut any kind of material. Every housewife will appreciate this feature as she knows how annoying it is to try to cut out different kinds of materials with a dull pair of shears that cannot be adjusted. These shears are made of the best carbon steel, which insures strength, and an "always sharp" keen cutting edge.



Free a pair of these shears given absolutely FREE, postage paid, with a three-year subscription to Western Farm Life. Subscription may be new or renewal.

We have only a few of these Shears left, and orders will be filled as received.

USE THIS COUPON

Western Farm Life, Denver, Colo.:

Gentlemen—Enclosed herewith find $1.00 for which please renew my / send me } WESTERN FARM LIFE for three years, and send me, postage paid, the 8-inch Tension Shears.

Name .....

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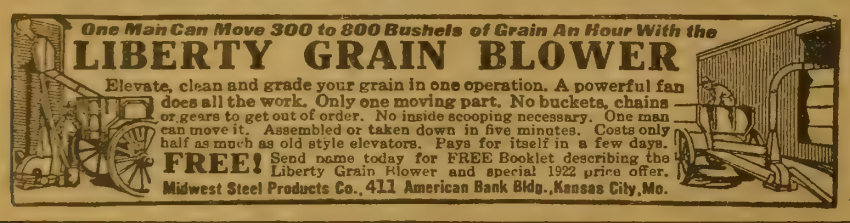


agency of a co-operative bull association. Here are some of the things which such an association can do:

Gives you an exchange of three or more bulls for the first small investment.

Offers opportunity to try bulls, and retain the best.

Makes the dairy cattle in a community uniform, helps to sell them and may also assist in buying.

Provides good purebred bulls for the farmer with a small herd.

Is useful to all breeders of dairy stock, but most useful to the one with so few cows that he, alone, cannot afford to buy a good bull.

Helps the ambitious dairyman, strengthens his hopes, and arouses his enthusiasm.

Permanently establishes in a community one breed of cattle, and a systematic means of continuous dairy herd improvement by making maximum use of prepotent sires and by reducing losses caused by undesirable bulls.

A bull association does not necessarily contribute to the spread of abortion or tuberculosis.

When you want a bull association, plan a block with your neighbors—or be a whole block by yourself if you have no neighbors); then go to your county agent and arrange for two or more other communities to form blocks. When they have become interested, call a general meeting and organize. Get your state dary extension man to be present at this meeting to assist.

Big Cows Give More Profit.

Figures collected from various cow-testing associations throughout the country and compiled by the United States Department of Agriculture tend to confirm the previous conclusions of the department that within the breeds, so far as they were represented by these animals, which were mostly grades, the large cows are the biggest producers of dairy products and are also the most profitable. The evidence seems to point to the fact that in the individual farmer's herd it will be found that on the average the larger cows are more profitable than the smaller ones, although there are some indications this may not hold true in the case of herds of native cattle containing much beef blood.

The cows whose records have been used by the department have been sorted out so that only mature animals were used for these comparisons, thus eliminating any differences that might have been caused by the immaturity of some cows.

In one group for which figures have been prepared there were 160 cows classified as small, 201 as medium, and 129 as large. The small cows averaged 243 pounds of butterfat a year, and made an income over the cost of feed of $77.39. Those of medium size made 289 pounds of butterfat and an income over feed cost of $88.91. The large cows produced 345 pounds of butterfat and a return above feed cost of $105.74.

In another group there were 461 small cows, 483 classed as medium, and 326 large. Those in the first classification made 240 pounds of butterfat on an average and an income over cost of feed of $89.11. The mediums made 278 pounds of butterfat and an income over feed cost of $108.29.

These tables were based mostly on figures for the year 1916 to 1919, inclusive, which accounts for the high average income over cost of feed.

Safe Farming Practices.

Every farmer should make his living expenses from the profits of the dairy cow, the hen and trucking, says the committee of the farm bureau of Saguache county, in outlining the program to be recommended for the coming year on the farms of the county. Many might go even farther for some farmers are so situated as to be able to make dairying and its sidelines their main sources of revenue. The great need is ready money and less risk by not having the eggs all in one basket. Diversifying operations accomplishes both these results.

The program adopted by this county farmers' organization will tend to bring about stabilization. Already more dairy cows are being milked. Interest in poultry production is on the increase. Farm poultry producers are learning how to cull out the boarder hens and pullets. Some are looking into the matter of growing some head lettuce on the side where conditions as to production and markets are favorable. Increasing pork production as a means of getting the most out of the skim milk which is a by-product in dairy farming, is appealing to some. The introduction of nearly fifty milk producing cows into this Western Slope county and six pure-bred Holstein and Shorthorn bulls of milking strains, is a progressive step in the agriculture of the county. Where cows are milked, running expenses will be met and profits from crops will be clear.

Why Not Grow Certified Seed Potatoes This Year?

(Continued from Page 3.)

year of certification in Colorado, of which forty passed and received the state certificates. All surplus seed was sold at an advance of 100 per cent over prices for table stock.

More Seed Growers Needed,

Colorado has a climate like that of the natural home of the potato, and it is beginning to be recognized that seed stock grown under Colorado conditions has vigor and vitality not found in stock grown in many of the commercial producing sections. It is a line of potato growing with big possibilities. It requires a great deal more care and watchfulness to grow seed potatoes than to grow table stock.

The seed potato grower should take his job seriously and obtain and study all the bulletins on the subject from his experiment station, from the United States Department of Agriculture and other sources of information. Growers who are not willing to go to this extra trouble should not attempt to grow seed stock. The best and most skilled growers will eventually become the growers of seed and the reputations they build up for honesty and integrity will require all their skill to maintain. There is yet room for many more in this inner circle of potato growers if they are willing to pay the price. And they need not fear that their efforts will fail of reward. We are in great need of a group of highly specialized men in this business—men whose vision clearly distinguishes between growing seed potatoes and merely growing potatoes to be sold for seed.

Grange Legislative Leaflet.

It is evident that the National Grange does not believe legislation can remedy all the troubles of agriculture and other industries. A legislative booklet has just been printed by the Washington office of the Grange and placed in the hands of every member of Congress. Upon its cover page appears the following statement by Sherman J. Lowell, Master of the National Grange:

"The present need of this country is not more laws, but an honest enforcement of what we have. As a great militant body of law-abiding people, the Grange has always stood for orderly government, and in its own membership it has been a fine exemplification of the great American truth that "Obedience to Law is Liberty.' Laxity in law enforcement wherever indulged threatens destruction and should immediately command the effective rebuke of every true citizen."

Speaking of the Grange itself, the booklet says:

"Through the fifty-five years of continuous activity and experience the Grange has developed a safe but aggressive leadership of real farmers, who do not seek to mislead others, who serve the interests of the real farmers, and who cannot themselves be easily misled. Under this leadership the Grange has accomplished a program of strong, fundamentally correct and practical reforms, which justifies the faith of the entire membership of this leadership, and entitles it to the confidence of all patriotic citizens."

The Washington office was established January 1, 1919, and T. C. Atkeson placed in charge. One of the resolutions under which it operates reads as follows: "Said headquarters may, and in our judgment should, co-operate with other farmers' organizations in support of such policies or measures as may be mutually agreed upon." According to Mr. Atkeson progress must come from personal initiative, emulation and human aspirations for better things. Our people should not expect the government to do for them what they should do for themselves.

We do not have space to quote at length from this Grange booklet, but would urge that every person interested in the Grange program write to the Washington office of the National Grange for a copy. A few copies are available for general distribution.

Elbert County Shorthorn Sale.

The members of the Elbert County Shorthorn Breeders' Association will hold their fourth semi-annual sale at their sales pavilion, Elbert, Colo., on Wednesday, April 26. At this sale they will offer 25 registered bulls and 15 registered females. The entire offering of this sale has been passed on by a competent committee, and the very highest quality can be depended upon. Farmers and stockmen who will be in need of Shorthorn breeding stock this spring, will do well to plan to attend this sale. For full particulars see special announcement in this issue, or write Dewey Carnahan, secretary, Elbert, Colo.

A cow owned by Spencer Penrose leads the Colorado Holsteins in the aged cow class of the 305-day A. R. O. division. This cow completed her 305-day period in the advanced registry work with 14,091.1 pounds of milk and 530.42 pounds of butterfat and an average test of 3.76. In the senior 3-year-olds the state leader is a heifer owned by the American Beet Sugar company, producing 19,642.9 pounds of milk and 577.86 pounds of fat. This is from information compiled up to February 25 by the superintendent of advanced registry of the National Holstein association.

IN THE NEXT ISSUE

Colorado Farmers Feeding Cattle Under Contract

THIS is a proposition that has been a money-maker for many farmers this winter. In the next issue, April 15, Mr. Wheeler, Associate Editor of Western Farm Life will discuss this feeding proposition in a painstaking and exhaustive manner. The article will contain full information as to the conditions of the contract between the cattle owner, and the farmer, and the experiences and results that some of our Colorado farmers have had with this manner of feeding, the past winter. Every stockman and farmer will wish to read this article carefully. Watch for it in the April 15 issue.

Special Features in Current Number

Why Not Grow Certified Seed Potatoes This Year?
Essential Principles of Co-Operative Marketing.
Good Garden Saves Money and Keeps Doctor Away.
Measures to Better Finance Farm and Ranch Operations.
Farmers' Service Bureau.
Market Outlook for Farm and Ranch Products.
A Successful Co-Operative Business
Making the Farm Orchard Pay.
The Rural Household.
Profitable Farm Poultry.
Trees and Shrubs Adapted to Southeastern Colorado.

The above articles cost you, as a subscriber, less than 2c. In addition, you have a wealth of other short articles and stories thrown in for good measure. This issue is a real bargain, isn't it? Is there anything that you are buying for your farm or ranch that gives you so much for so little money? One idea from Western Farm Life, properly applied, may make you more money than the magazine would cost you for a lifetime.

Will you do this: After you are through with this copy, hand it to a neighbor and tell him what a good magazine it is. Tell him that it is a real bargain at the present subscription price of three years for one dollar. You may be pleased to know that every day brings us subscriptions as a result of subscribers passing their magazines along to neighbors. Join the boosters for Western Farm Life and we will repay you by making it a bigger and better magazine for you as the months roll by.

PRIZE WINNERS

Shorthorns, Herefords, Guernseys, Holsteins, Jerseys, Poland Chinas, Duroc Jerseys, Including Grand Champion Poland China Boar.

Colorado Agricultural College, Ft. Collins, Colo.

Buy Your Foundation Now

In Purebred Livestock from a big organization that spares no money to buy the best and specializes on purebred registered

Herefords *Percherons*
Holsteins *Duroc-Jerseys*

Breeding stock of all ages for sale.
Individual or carload lots.

MYRON STRATTON HOME FARMS,
James J. Gauld, Supt. COLORADO SPRINGS, COLO.

General B.

MILKING SHORTHORNS.

PRIZES

TAKEN BY THE

WYLDEMERE FARM Milking Shorthorn Herd

AT THE WESTERN STOCK SHOW, DENVER, 1922.

2nd Prize Royal Glenside.....Aged Bull.

1st Prize Calf Herd.....
1st Prize Get of Sire..... } The Get of Royal Glenside
1st Prize Young Herd.....
1st Prize Produce of Dam...

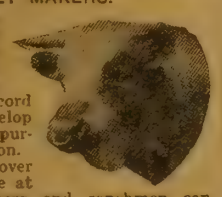
1st Prize Yearling Bull.....
1st Junior Champion .....
1st Reserve Grand Champion.. } The Get of Royal Glenside
1st Prize Junior Bull Calf .
1st Prize Senior Bull Calf...

1st Prize Senior Heifer Calf.
1st Junior Champion Female.
1st Grand Champion Female.
2nd Prize Two-Year-Old Heifer.
4th Prize Two-Year-Old Heifer.
4th Prize Senior Yearling Heifer.
2nd Prize Junior Yearling Heifer.
3rd Prize Junior Yearling Heifer.
4th Prize Junior Heifer Calf.

J. B. BENEDICT
Owner and Breeder.
Littleton, Colorado.
JOE GOETZFRIED, Herdsman.
NOTHING FOR SALE AT PRESENT.

Shorthorns That Milk

ARE MONEY MAKERS.



A herd that will give you a good monthly cash income is what you will need in the future. One of our young bulls from a Record of Merit cow can develop your herd into a dual-purpose paying proposition.

We know the war is over and have bulls for sale at prices that you farmers and ranchmen can afford to buy. Write for our bargain list and easy payment plan.

We also have several young bulls for sale, priced to sell.

THE PINE VALLEY DAIRY & FARMS CO.
Seeley G. Rose, Mgr. Colorado Springs, Colo.

Bates Shorthorns

are the foundation blood of true Milking Shorthorns. We have them. A few bulls for sale.

THE CARPENTER CATTLE CO.
GREELEY, COLORADO

Buy MILKING SHORTHORNS

from the oldest established herd in the state. We can supply your needs in bulls of beef type either horned or polled Shorthorns.

Write Superintendent for folder on breeding and prices.

State Industrial School,
Golden, Colo.

MILKING SHORTHORNS

All Cows in Milk Officially Tested.

Service bulls of World's Record breeding. Both males and females for sale. Personal inspection invited. Send for Illustrated Booklet.

THE BONVUE FARMS CO.,
Stockyards, Denver, Colo.

If in need of advice, ask Western Farm Life Service Bureau.

HOLSTEINS.

Only One Bull Left

Just one bull of serviceable age is left for sale in our herd. His dam made 15 pounds of butter as a yearling and will be tested for year's work this fall. She is a wonderful milker and the daughter of a 4-year-old with a year record of 25,208 pounds of milk and 878 pounds of butter, while the granddam of the bull's dam milked 108 pounds of milk in one day and 3,100 in 30 days. Two direct generations of 100 pound cows back of him. He is a good individual, mostly white, and sired by Denver Sir Segis, a 30-pound son of our senior herd sire, Johan Duchess De Kol Lad. What will this bull be worth to some good breeder?

Sanborn Meadows Holsteins.
MRS. R. G. DOUGLAS,
Rush P. O., Colo.

4 Registered Holstein Bulls

FOR SALE—One 3-year-old; three 2-year olds. Three are direct descendants of Pontiac Korndyke 25982, and the fourth carries Dirkie, DeKol, Aaggie and Nemea strains. For further information address

THE NILES FARMS,
706 Kittredge Bldg. Denver, Colo.

We have bred hundreds of prize-winning and high-producing Holstein cows, including

Tilly Alcartra

We can supply you with that same line of breeding. Write

McKAY BROS., Caddoa, Colo.

WALLIE FARM REGISTERED HOLSTEINS,
4800 S. Penn, Denver. W. G. Foster, Owner
Home of "Colorado Count," whose 29 sisters broke 140 world's records.

Bulls of Serviceable Age for Sale

Excellent individuals. World's record blood. Terms to responsible buyers. Wallie Farm bulls are guaranteed.

PRODUCTION — TYPE — SIZE

We offer you a wonderful amount of these Holstein qualities—and from a clean herd. Bull calves from fine record dams. Pahgre Valley Ranch, Loesch Bros., Montrose, Colo.

BREEDING

Buy a Calf Out of This Herd

Twenty cows in this herd on an official seven-day test averaged 446.13 lbs. of milk and 20.19 lbs. of butter.

COLORADO STATE HOME,
2305 S. Wash. St. Denver, Colo.

D'ARCY HOLSTEINS

Have made good at home and they will do the same for you. A few choice calves can be purchased now at a price that can't help but make you money. Write

NORMAN R. D'ARCY
Parker, Colo.

GREAT BARGAINS, 960 HEAD HEREFORDS, SHORTHORNS, ABERDEEN ANGUS

1, 2, 3, 4 and 5 years old. Cows, heifers and bulls. Prices $75 to $120 and up. 360 Percheron and Belgian horses, stallions, mares and colts, 1 to 6 years old. Prices $125 and up per head. One head or a carlot. Breeding guarantees with each. Registered pedigrees by mail. Stock on twenty farms in Iowa and Illinois. Write for circular and particulars. Address ILLINOIS HORSE & CATTLE CO., Good Block, Des Moines, Iowa.

The Elbert County Shorthorn Breeders' Association

WILL HOLD THEIR FOURTH SEMI-ANNUAL SALE OF SHORTHORNS IN THEIR SALE PAVILION AT ELBERT, COLORADO,

Wednesday, April 26, 1922

25 Bulls——40 Head——15 Females

This is one of the best offerings that the association has made. Every animal has been passed on by a competent committee. The cattle business is rapidly coming back. Packers, farmers and feeders are clamoring for better cattle, and this is your opportunity to improve your herd.

DEWEY CARNAHAN, Secretary.
C. A. Melburn, President. A. G. CORNFORTH, Chairman Sale Com.
Auctioneers—COL. ALEX. J. WATSON and MAPEROTT.

HAMPSHIRE HOGS.

FOUR YEARS THE BEST

Meat Type Hampshires

The International Livestock Show is the test of hog producing power. Hampshires have won the grand championship in this test four years in succession—1918, 1919, 1920, 1921—in the hands of average farmers. No experts needed to make Hampshires win.

Hampshires are the greatest of all forage hogs, making the highest-priced pork out of the cheapest feeds on the farm. Active, vigorous and healthy, they raise exceptionally large litters. At the International they have shown, almost without exception, the heaviest spring pigs of any breed, carrying always the heavy, high killing, lean meat type. For free Hampshire information and for names of breeders in your neighborhood, address

Amer. Hampshire Swine Record Ass'n, E. C. Stone, Secy., Dep. 7, Peoria, Ill.

SHORTHORNS.

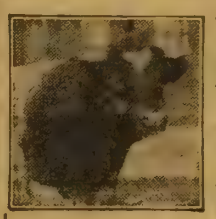
Sam Ball Shorthorns

Are the big hardy kind that make good under the most trying range conditions. At the head of the herd is

Big Sandy

From this herd came the sires of the grand champion carlot steers at the 1920, 1921 National Western. TWENTY BULLS, 2, 3 AND 4 YEARS OLD, THAT WE WILL SACRIFICE IF TAKEN AT ONCE.

SAMUEL BALL, WRAY, COLO.



Where the Profit Is

A 1,250-pound steer selling for 10c per pound brings $125, while a 1,500-pound steer at the same price per pound brings $150. There is a difference of $25, which may represent the only profit there is to the feeder. Shorthorns have this advantage of extra weight combined with quality. American Shorthorn Breeders' Association, 13 Dexter Park Ave., Chicago, Ill.

SUNNYSIDE ROBERT

SHORTHORNS

We have for sale cows, and cows with calves by side, and heifers. Scotch and Scotch tops. A few choice bulls left. We make 'em make good. Write us.

GLEASON & BLAZER, Kiowa, Colo

SHORTHORN BULL FOR SALE.

ADVOCATES URR, roan, calved Sept., 1919. Bred by H. F. Harmon. Sire, Imp. Advocates Model 647679. Dam, Maid Marian 138615; sire, Gladstone 239313. Dam, Merry Maid 2d 29528; dam, Nonpareil Victor 2d 258255. Dam, Merry Maid 72d; sire, March Knight 188105. Dam, Imp. Winsome Maid; sire, Marchison 192330.

H. F. HARMON, BOULDER, COLO.

SHADELAND STOCK FARM

BREEDERS OF

SHORTHORN CATTLE

Herd headed by Maxwalton Rustler, a grandson of Avondale.

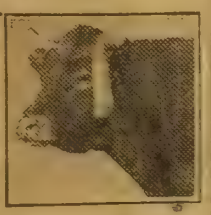
Chester White hogs of best breeding stock for sale. Also Ringlet Barred Rock eggs for hatching. G. W. BALL & SONS, Pierce, Colo.

GUERNSEYS.

GUERNSEYS

Sired by the Grand Champion bull at the 1921 National Western and State Fair, both male and female, are for sale. Write

H. D. PARKER
GREELEY, COLO.



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PLEASE MENTION
WESTERN FARM LIFE.
(Both Publisher and Advertiser Will Appreciate It.)

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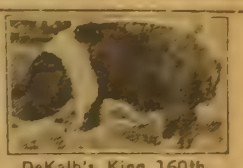
Hampshires

by Grand Champion sires and dams. Breeding stock for sale.


DeKalb's King 160th.

C. S. BRATT & SON, ARAPAHOE, NEB.

POLAND CHINAS.

Mather's Big-Type Polands

sold to breeders in four states this year are giving satisfaction.

BUY WEANLING PIGS

at prices that will surprise you.

C. J. Mather, Longmont, Colo.

CHOICE BIG-TYPE

Poland China Pigs

Either sex, sired by F. B's Long Bob. ...WHITE LEGHORN EGGS, $2.00 per setting, $7.00 per 100.

F. B. MORGER, FOWLER, COLO.

Maple Shade Farm Polands

WEANLINGS AT $20 EACH.

Pairs and trios not akin. Sires: Peter The Giant, Peter the First, N. C. Ranger. Dams: By Buster of the Clan, Liberator, Emancipator, Ott's Giant. Long Joe.—Bred Gilts Immune, Registered. F. O. B. Sarcoxie, Mo.

W. W. PELSUE, Carthage, Mo. Rt. 3.

SPRING BOARS

Just a few real herd headers left ready to go at pre-war prices. Used with grade sows even, they will more than pay for themselves on the first crop of pigs. Write today.

C. C. Boyd, Yuma, Colo.
Livestock Auctioneer and Duroc Breeder.

DUROCS.

DUROCS

Gilts bred to my champion boars and June pigs from my great yearling "Golden Chief" and a daughter of the World's Grand Champion, Great Orion Sensation, can be seen at the Stock Show.

J. W. Brauer,
22 Lorraine St., Colorado Springs, Colo.

HEREFORDS.

THE MARKET LOOKS PROMISING.
RESTOCK NOW WITH

HEREFORDS

Some choice heifer calves and a few bulls of Beau Santos and Bright Stanway breeding are for sale.

J. D. Craighead, La Junta, Colo.

D. S. Polled Herefords

Cows from Polled Plaza, herd headed by POLLED SUCCESS A 3rd. Young bulls and heifers for sale.

Smith Livestock Co.
CHIVINGTON, COLO.

"THE Quality of stock offered by Western Farm Life advertisers is good, and the low prices make this an exceptionally good time to buy.—Write advertisers for prices and terms."
—Livestock Fieldman.

SEND NO MONEY

Factory Loss Sale

Quality Merchandise Offered Direct to the Public at an Enormous Saving!

SEND NO MONEY

Don't Send A Single Penny

Carloads of the country's best merchandise—all to go at less than cost to manufacture in this great sale! Huge volume purchases have made these prices possible. Some of these goods were made for the government, and released at an enormous loss. Others were made for export and refused because of the exchange rate. Others were sacrificed by factories that needed spot cash. All are made of best quality materials. Every item is a big bargain and priced for immediate clearance. You do not take the slightest risk in ordering as we guarantee to refund every penny if you are not satisfied. Don't send a penny with your order. Just pay postman when goods arrive. But order now! These bargains will not last long at our rock bottom prices.

U. S. Army Wool Blankets

Regular O. D. Khaki Color, All-Wool

A $10.00 Blanket

$2.98

plus postage on arrival

Order No. 2200

The most sensational bargain yet in army goods. Guaranteed perfect condition Khaki color O. D. all wool U. S. army blankets, all full size 66x84. Send in your orders at once. Be sure you get several at this big bargain price.

MEN'S WORK SHOE

Sizes 6 to 11
Order No. 186

$1.98

plus postage on arrival

Dark Brown Color

A sturdy work shoe with heavy, long wearing upper stock, double leather insoles and guaranteed counters. Made especially for the modern farmer, with uppers tanned to resist acids. Guaranteed to please or your money back. Don't send one cent. Pay postman when you get the shoes.

DRESS SHOE BARGAIN!

Order No. 807

$1.98

Plus postage on arrival
Sizes 6 to 11

Truly a wonderful bargain in a man's dress shoe. Not even before the war was it possible to equal this wonderful shoe at $1.98. They were made for export but could not be shipped on account of exchange rate and are now sold at half their value. Order at once and get in on this big bargain!

Genuine Kid Comfort Oxford

Order No. 1212

$1.85

plus postage on arrival

Sizes 3 to 9

We challenge all competition on this number. A genuine kid comfort oxford made with low heel and a wide roomy toe. Order now! These oxfords will go quickly at this greatly reduced price.

Outing Shoe Sensation!

Men's Sizes, 6 to 12
No. 102

$1.88

plus postage on arrival

Boy's Sizes 1 to 5½
No. 314

$1.75

plus postage on arrival

Boys' Sizes, 9 to 13½
No. 315

$1.49

plus postage on arrival

A wonderful bargain. Men's or boys' outing pattern made with tough ruleskin duck uppers, comfortable and wear like iron. You will never find better bargains. Order these at once.

FOR THE KIDDIES

$1.25

Plus postage on arrival

Sizes 3 to 8. Order No. 460

These shoes would be a bargain at $2. They are soft kid leather and have a flexible durable sole. Will give the children a surprising amount of wear.

BALL STRAP OXFORD

$2.49

plus postage on arrival
Order No. 1208
Sizes 2½ to 8

The very latest and most attractive style in lowcuts offered this year. A beautiful Havana brown color in ball strap design, medallion tip and rubber heel. A startling value at $2.49.

LADIES' JULIET

$1.78

Plus postage on arrival

SIZES 3 TO 8
Order No. 239

Ladies' fine kid-finished house shoes with rubber heels and flexible soles. Don't fail to get in on this big bargain at only $1.78. Your money back if not satisfied.

HIP BOOTS

$2.69

plus postage on arrival

Sizes 6 to 12
Order No. 173

Absolute first quality hip boots at less than cost to manufacture. Order at once while we still have them in stock.

Ladies' English Walking Boot

Half price while they last.
Black color No. 923

$1.98

plus postage on arrival
Sizes 2½ to 8.

Same shoe in dark brown, No. 928

$2.49 plus postage on arrival

Here we beat every bargain price ever offered, even before the war. Think of it! A ladies' boot at $1.98. And it is a strongly made boot with lots of wear in every pair. Only a limited quantity. When these are gone we can get no more at this price. Order yours at once at $1.98, brown, $2.49.

Ladies' Ball Strap Model

$2.98

Plus postage on arrival

Sizes 2½ to 8
Order No. 277

DARK BROWN COLOR

The very latest style. Ladies' ball-strap with medallion tip in a rich dark brown shade. Very popular in the cities where these styles sell for from $6 to $8. Made of durable upper stock and has natural finish sole which insures the greatest wear.

Order a pair at our risk. We will gladly refund your money if you are not more than pleased with this graceful and stylish model.

TIRE PRICES SMASHED!

30x3
$7.45
Plus
Postage

30x3½
$8.45
Plus
Postage

BRAND NEW STANDARD TIRES GUARANTEED 6,000 MILES

NON-SKID TREADS

Positively the biggest tire bargain yet. Remember these are brand new standard non-skid tires made generously oversize and guaranteed to last 6,000 miles or adjustment made on the basis of mileage used. Many give 8,000 to 10,000 miles. We do not sell seconds or rebuilt tires. Sent C. O. D., no money in advance. You don't risk a penny. Prices

30x3	$ 7.45	32x4	$14.95
30x3½	8.45	33x4	15.95
32x3½	12.45	34x4	16.95
31x4	13.45		

PLUS POSTAGE ON ARRIVAL

$10.00 SPRING TOPCOAT

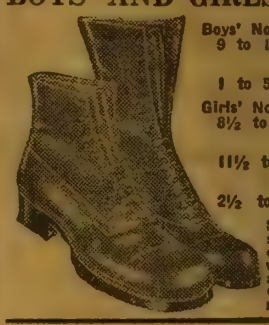
$3.95

Plus postage on arrival

Sizes 34 to 46
Order No. 3400

Same pattern as the stylish gabardine coats which sell in the large cities for $20 to $30. Made from extra strong and durable khaki-color material and are full rubber lined, absolutely waterproof. Makes a wonderful medium weight coat. Remember we will refund every penny in case you are dissatisfied.

BOYS' AND GIRLS' SHOES



Boys' No. 301, 9 to 13½... $1.98
1 to 5½.... $2.49
Girls' No. 462, 8½ to 11... $1.69
11½ to 2... $1.89
2½ to 8... $1.98

Strong, sturdy shoes for both dress or school wear. Real clearance bargains! Order what you need NOW.

Ladies' Comfort Shoe

Sizes 3 to 8
Order No. 233

$1.98 Plus postage on arrival

Made of fine, soft kid-finished leather with rubber heel and flexible sole. Many women with foot trouble have found instant relief in these shoes. Don't send one penny. Just pay when the shoes arrive. Your money back at once if not satisfied.

HOUSE DRESS BARGAIN!

98c

and postage on arrival

Order No. 4101

Ladies! Be sure to get in on this big bargain at once. One of the neatest, most practical garments imaginable. Has short sleeves and neat turnover cuffs, V neck in a slipover style, white binding on edges. Comes in a good looking pattern and has large, roomy pockets. A truly practical and useful garment and priced at a big saving. Order now!

LADIES' 1-STRAP

$1.49

Plus postage on arrival
Order No. 210
Sizes 3 to 8

Ladies' easy, comfortable kid finished one-strap slippers. One of the best bargains ever offered.

SATISFACTION GUARANTEED! We don't want our customers to risk one cent. Send us your order without a penny in advance. Pay postman when the goods arrive. Then if not satisfied after examination you may return them and get back every cent including postage. Order at once! Bargains like these won't last long.

GORDON BATES SHOE CO.

DEPARTMENT V, MINNEAPOLIS, MINN.

IN

Soil Blowing and Some Ways of Circumventing It—Page 5

WESTERN Farm Life

Vol. XXIV. *Denver, Colorado, April 15, 1922.* *Semi-Monthly*

IT'S SPRINGTIME. YOU CAN SEE IT IN THEIR FACES.

Heavier

Sidewalls
Breaker Strip
Tread

THIS oversize Santa Fe is our greatest triumph in five years of tire building—new construction throughout—more air space and heavier cushion absorb the road shocks—heavier sidewalls insure long life on rutty roads—heavier tread means safety on wet pavements, better traction in mud, more miles. Let your dealer show you Santa Fe Trail Tread.

Price
Value
Service

Dealers — Write for proposition that makes you money and friends.

Hawkeye Tire & Rubber Co.
Manufacturers
219 EAST THIRD STREET DES MOINES, IOWA

Western Canada Offers Health and Wealth

and has brought contentment and happiness to thousands of home seekers and their families who have settled on her FREE homesteads or bought land at attractive prices. They have established their own homes and secured prosperity and independence.

In the great grain-growing sections of the prairie provinces there is still to be had **on easy terms**

Fertile Land at $15 to $30 an Acre

—land similar to that which through many years **has yielded from 20 to 45 bushels of wheat to the acre**—oats, barley and flax also in great abundance, while **raising horses, cattle, sheep and hogs** is equally profitable. Hundreds of farmers in Western Canada have raised crops in a single season worth more than the whole cost of their land. Healthful climate, good neighbors, churches, schools, rural telephone, excellent markets and shipping facilities. The climate and soil offer inducements for almost every branch of agriculture. The advantages for

Dairying, Mixed Farming and Stock Raising

make a tremendous appeal to industrious settlers wishing to improve their circumstances.

For illustrated literature, maps, description of farm opportunities in Manitoba, Saskatchewan, Alberta and British Columbia, reduced railway rates, etc., write

K. HADDELAND,
Great Falls, Mont.
Park Hotel, 104 Central Avenue.

Authorized Agent, Dept. of Immigration and Colonization, Dominion of Canada

160 ACRE FARMS IN WESTERN CANADA FREE

4 MAGAZINES, $1.00

WESTERN FARM LIFE....2 years
THE HOUSEHOLD.....1 year
GENTLEWOMAN .....1 year
GOOD STORIES .....1 year

ALL FOR ONLY **$1.00**

This Offer is Guaranteed for a Short Time Only — ORDER TODAY.

WESTERN FARM LIFE, Denver, Colo.:

Enclosed find $1.00, for which send me Western Farm Life two years, The Household, Gentlewoman and Good Stories, each for one year.

Name .....

R. F. D..... Postoffice..... State.....

If you are a subscriber now to any of the publications your subscription will be extended from present expiration date.

Tractor on Beet Farm.

In my experience with a small two-plow tractor on a 160-acre irrigated farm it has been a paying proposition. The machine is light—not weighing more than a small team of horses—and does not pack the soil; it rather subsoils the bottom of the furrow with the lugs, when plowing with a two-way plow. With a machine of this size one man can do the work of two men and six to eight horses.

The cost to plow an acre is about one-third less than with horses and a big advantage I found over horses, was that by running it at night, I could prepare more ground while conditions were just right. I also find that the greater speed of the tractor when plowing pulverizes the soil, allowing no air spaces between the furrow slices, which aids a great deal in holding the moisture that is in the soil.

I have used the tractor to do all my plowing for sugar beets which was ninety-three acres last year, spread manure, harrow, disk, pull a grain binder, etc., and it has proven very satisfactory and reliable. This year I intend to put a pulley on for belt work so that I can fill silos, grind feed and run a hay baler, which will add greatly to its usefulness.—L. E. Larsen, Morgan county, Colo.

Clearing Sagebrush Land.

Has anyone devised some economical method of clearing sage brush land? The usual methods require so much horsepower and so much time and labor as to be almost impractical for the ordinary homesteader with small capital. I am told Colorado laws prohibit burning over sage brush land. Our homestead is about one hundred miles west of Denver. The sage brush stands three feet high.—J. J. A., Wyoming.

Has any one solved this problem in a practical manner? We can suggest nothing different than the ordinary method. There are no laws preventing a man from burning sage brush on his own homestead, but he must exercise caution and if the fire gets away and does damage he is liable. A homesteader in a forest reserve section would do well to confer with the forest ranger, asking his advice and suggestion before attempting to burn brush.—G. C. W.

Disk Plow for Tractor.

Last spring I bought o Fordson tractor and have been using a ten-inch double sulky plow—a riding, horse-drawn implement—with it. I have not been able to get good work from it and am going to buy a plow suitable for the Fordson. My land does not work well with a moldboard—this is the case in all land around here—and I have decided to get a disk plow. I am, however, uncertain what size of plow to get. This is dry land I am plowing and I particularly want to get good depth in plowing. Will an Oliver 26-inch three-disk work for me? Or would the two-disk 26-inch plow be better? I want to plow eight to ten inches deep. I have been told that a 26-inch disk plow will pull easier than a 24-inch. Is this true?—J. A. R., New Mexico.

At the New Mexico experiment station, where the soil is heavy, a new Fordson tractor had some difficulty in handling two 24-inch disks to a depth of eight inches. I am not familiar with your particular soil, but think your Fordson tractor will have all it should handle with the two 24-inch or 26-inch disks to the same depth. Overloading a tractor will materially shorten its life, and does not pay.

There is little choice between the 24-inch and 26-inch disks set to cut the same width and depth. The 26-inch disk has slightly more leverage, therefore a little lighter draft, yet this same leverage tends to make its life slightly shorter than that of the 24-inch disk.

All of the standard tractor plows do good work, but you will find the horse-drawn implements are not satisfactory when remodeled for tractors.—G. R. Quesenberry, New Mexico Experiment Station.

Standardizing Lightning Protection.

Protecting buildings against lightning has been developed to the point where there are practical methods and appliances for the purpose, but because of unscrupulous agents who a score or more years ago succeeded in selling equipment that did not protect, all methods and equipment came into disrepute among farmers and others. In order to put the mark of official and scientific sanction on lightning-protection methods, there was recently appointed, through the collaboration of the Bureau of Standards, the Weather Bureau, and the American Institute of Electrical Engineers, a committee to prepare a code. Progress already has been made in the solution of this problem and many well-established principles have been made known to interested scientists and workers. It is hoped that the work of this committee will result in developing practical methods, practices, and appliances and make farm buildings and other structures safer.

Dry-Farming Experience.

In dry farming the thing to do is to conserve as much moisture as possible, hold this moisture as deep as possible until needed at surface, and then to coax it up to the surface without loosing too much of it. It can be done, but it takes a lot of work. First of all, you must have soil, not gravel; second, practice deep plowing. Plowing should include pulverization of sub-surface, packing and light dragging, in one operation if possible. Farmers would do well to perform this co-operatively in order to accomplish this one most desirable object, especially where the power used is teams. Next, follow a rotation. This will vary according to soil. My experience is limited to one kind of soil, deep black or grayish black, sandy loam, such as is found in southeast Wyoming and northeast Colorado and western Nebraska on the prairies. In this kind of soil I have found one deep plowing in six years is sufficient, providing every other year corn listed in is grown and never a small grain crop following a similar crop. This is part of the conservation system.

You ask about summer fallow—that is well where the wind does not blow, but I prefer to grow corn and feed it on the place. I have had occasion to verify the advantage of the corn crop rotation this year more than ever before. A neighbor of mine raised twelve bushels of spring wheat on last year's corn ground and two and one-half to four bushels on last year's small grain ground, all put in at the same time in the same field. That particular locality was the dryest it had been in years and this neighbor is an exceptionally good farmer.—Fred Larson, Wyoming.

Experience With Hubam Clover.

Two years ago, through the courtesy of my fellow sweet clover enthusiast, Dr. V. T. Cooke, I obtained a small sample of seed of the Hubam sweet clover. After giving it two years' trial I do not hesitate to brand it a failure, at least for this territory. The biennials are so far ahead of it that there is no comparison. Its slow growing habit at first gives the weeds the advantage in the spring and in the fall when it grows the fastest the ground is generally dry. It barely matured a small amount of seed and that after the first nipping frost. It may be alright further south or at a little lower altitude, but here anything in the way of an annual must make a quick even get-away early in the spring.

In growing habit Hubam sweet clover is similar to the biennial white, having one straight stalk. I prefer the biennial yellow, which is more branching and has a finer stalk. I raise all kinds in rows, cultivating the same as corn, but the annual had to be hoed besides on account of weeds. It grew to an average height of four and one-half feet. To those who are afraid of seeding their places down to sweet clover it may be appealing, but I see no reason why the seed would not lay in the ground over winter the same as any sweet clover, but to any dry-farmer dairyman no calamity of greater benefit could come to pass. My greatest trouble is in not getting my stands to stay with me long enough. I have little trouble in curing it in this dry climate, and have seen stock leave both bright millet and prairie hay for sweet clover after they knew the taste of it. I think enough of the biennials that I expect to plant increasingly of them each year for hay, pasture, seed and fertilizer.—Oakley G. Pierce, Weld county, Colo.

Seeds Alfalfa With Drill.

The farmers of this community have experimented with different methods of sowing alfalfa seed and have found the following method most successful here: Use a press drill with long spouts from seeder box, dropping seed right in front of press wheels which will cover and firm the soil over the seed the same as when planting any other crop. Good results will be obtained with this method by using from eight to fifteen pounds of seed to the acre, depending on condition of soil, also on high or low germination of seed. The seed sown in rows will have the combined help of all the plants to force themselves through crusts which may form caused by heavy rains. Sowing alfalfa seed broadcast is wasteful and unsafe and should never be practiced.—W. L. Johnson, Morgan county, Colo.

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Colorado Farmers Feeding Steers Under Contract

GROWER AND FEEDER SHARE IN THE PROFITS OF FINISHING

By Geoorge C. Wheeler.

FEED valued at $436.06 was put into fifty-three steers fed under contract the past season by Ben A. Johnson of Adams county, Colo. The cattle were owned by Wm. A. Braiden of the San Luis valley. The total gain made was 8,812 pounds, or 167 pounds to the steer, and the selling price $6.85, which brought Mr. Johnson $593.66 for his feed. To this should be added $50 received for hogs which fed after the cattle. Beet top silage was figured at $4 a ton. This had no market value. Alfalfa was figured at $4.50 a ton. It would have sold for $6, but there would have been the expense of hauling. One man can feed alfalfa, but it requires two to handle it from farm to car. Corn was fed for sixty days, costing $1.00 a hundred, or $127 worth.

Manure Produced Valuable.

The cattle had plenty of bedding and 225 loads of manure were hauled out. "If we break even on cattle feeding we are ahead," said Mr. Johnson. "This manure is worth $2 a load. One of our farms which we began farming in 1896, used to produce only fifteen to twenty-five bushels of wheat to the acre. Now it produces forty to fifty-five bushels, all due to increased fertility resulting from hauling out manure." These cattle were fed directly under Mr. Johnson's supervision. They ranged over the place for a month, gathering waste forage before they were put into the lot.

On another place in which Mr. Johnson is interested he placed 112 cattle, also fed under contract. These cattle consumed sixty tons of corn silage valued at $3 a ton, or $180 total. The corn would have husked out twenty-five bushels to the acre. They were fed fifty-five tons of hay at $4.50 a ton or $247; 4,000 pounds of barley costing $36, and wet beet pulp from the factory costing $53. In addition they were fed $20 worth of feed while being held at the other farm. Labor cost $110 on these cattle. They made an average gain to the steer of 117 pounds. Part of them sold February 3 brought $6.85, and the remainder sold later in two lots, $6.70 and $6.30, respectively. Three hundred loads of manure were hauled out from this feed lot, in addition to what the cattle distributed during forty days when they were ranging over the fields. "This contract method of feeding is an opportunity for the farmer who has some feed but cannot afford to take the risk," said Mr. Johnson. "I could have got the money for my feeding and ordinarily would prefer buying the cattle and taking all the risks myself, but there are men for whom this is not safe." To these some form of contract feeding would appeal, for it gives them an opportunity to realize on their crop wastes without taking the speculative risks of buying their own feeding cattle."

Sharing the profits of finishing cattle between the grower and the feeder is the feature involved in feeding cattle under contract. Ordinarily the grower ships his cattle to a central market and there sells them to some feeder who has the money to invest or the necessary credit. Under this plan cattle feeding has become more or less a business for a man with considerable capital. The feeder without capital must borrow and take the risks involved. The man with the feed and facilities for handling not more than a carload of cattle, if he is of a cautious temperament, will oftentimes hesitate before he takes the chances involved. If he loses, due to unfavorable turns of the market, his loss is serious. His eggs are all in one basket, as it were. The professional feeder on a large scale can stand an occasional loss because his operations cover enough range to permit of balancing losses with gains. And yet on many a farm there is feed every year which can be marketed in no other way than through cattle.

To the feeder of small resources, perhaps a renter, feeding cattle under contract comes as an opportunity to convert his feed into a marketable product at a minimum of risk. The grower of the cattle likewise stands a chance of eliminating some of his risks or at least the opportunity to have his cattle fed out instead of being forced to take whatever they may bring at a time when the feeder market may be glutted temporarily with its depressing influence on prices.

Contract Plan Given Try-Out.

During the past season Mr. Braiden, who runs a thousand purebred Hereford cows on his ranch in the San Luis valley, had about 400 cattle out on the contract plan in the territory around Denver. These cattle ranged in quality all the way from common cows taken on debt to high class purebred steers bred and grown on the Braiden ranch. The method of feeding of course varied with the class of cattle. In each contract the feeder was to get all the gain he made at market price when sold, furnishing all the feed and labor of feeding. The cattle were delivered to him at the Denver stock yards, being weighed after feeding and watering as is usual. Mr. Braiden paid all expense in getting them to the market and handling charges in the yards . When ready to be sold the feeder delivered the cattle to the same yards where they were sold.

The contract provides that in case death occurs from natural causes, or from some contagious diseases, Mr. Braiden stands all the loss, the weight of animals so dying being deducted from the original weights on the basis of the average of the lot when received. If the loss is due to carelessness in management, feeding bad hay, or allowing cattle to bloat on alfalfa, the two parties share equally in the loss. The selling weight in the yards is the basis of calculating the gains made by the feeder and he agrees to accept as full compensation for care and feeding, the gains made at the market price, all feeding expense to be met by the feeder.

Cows Consumed Crop Wastes.

Eighty-four cows were taken by Wm. M. Hopkins of Brighton. They were handled by a tenant on a farm which Mr. Hopkins owns. These cattle were used to clean up otherwise waste feed, or feed which would have been unmarketable. They were fed no grain. All they got was the beet tops which they cleaned up, and alfalfa hay. The cattle were never in a corral, being fed in the fields and around the stacks of hay until sold. They weighed in at 74,782 pounds, and when sold February 2 the ninety-nine cows and calves weighed 86,100 pounds, a gain of 11,318 pounds. The cows brought $4.82, which made Mr. Hopkins' feed bring him $445.53. In addition he had the full fertility value distributed over the land without expense. Mr. Braiden received $4.82 a hundred for the original weight of the cows, which was more than they would have brought in the fall. His extra expense had been the interest on the amount invested in them for the feeding period.

Fox & Ault of Brighton took out twenty-eight cows the same day and returned them to the yards March 1 with a gain of about 180 pounds to the cow, making approximately $9 a head for the beet tops, pulp, alfalfa and a little snapped corn which they consumed.

Feeder Producing Quality Beef.

Beef of the highest quality is being made by E. P. Dunlap of Adams county, who is feeding ninety of Mr. Braiden's purebred Hereford steers under contract. These cattle went into Mr. Dunlap's yards November 16 weighing 843 pounds. Mr. Braiden states that he does not believe they would have brought more than 5½ to 6 cents a pound last fall. They were shipped from his ranch on the feeding-in-transit rate, and can go to Kansas City or Omaha if it is thought best to try either of these markets. Mr. Dunlap is an experienced cattle feeder. He realizes that it is the eye of the master that fattens the ox and never have these cattle lacked comfort in the feed lot. Not a steer has been off feed.

"These cattle didn't know what corn was," said Mr. Dunlap. "We started them on snapped corn, breaking it up and scattering silage over the corn in the feed bunks. It was ten days before all the steers were eating corn and for two weeks we did not give them more than five or six pounds to the steer for fear the ones that were eating the grain might get too much. For two months they did not get more than ten pounds to the steer. They were getting all the good corn silage (Turn to Page 22)

These two-year-old Hereford steers from the San Luis Valley ranch of Wm. A. Braiden went into the feed lot November 16, averaging 843 pounds in weight. They are being fed under contract by E. P. Dunlap of Adams county, and have gained more than two pounds daily to the steer since being on feed.

Do Not Rush Headlong Into Head Lettuce Production

ADEQUATE TRANSPORTATION AND EFFICIENT MARKETING IMPORTANT

C. J. Meyer.

IT will require about fifty refrigerator cars from a single shipping point to move the head lettuce produced on fifty acres and that within a period of five or six weeks. If you do not have an iron-bound contract with the railroad to furnish the cars as needed, I would warn you to go slow in getting into the head lettuce business in a large way. During the past few months I have been in communication with leading commission firms in Denver and Kansas City, and prominent business men, regarding the head lettuce proposition. One firm says:

"We cannot encourage the raising of head lettuce in a commercial way in your section on account of the poor traffic conditions." Another writes: "While the samples of your head lettuce are of superior quality and flavor, and while we would like a few good growers to supply us lettuce of this quality from your locality, we could not advise you to make this a part of your farm business at the present time." Others replied in similar manner. These firms would like to handle our lettuce, but even commission houses try to give the producer a square deal nowadays.

Grower Must Take Risk.

As it costs about $250 to raise, ship, and sell a refrigerator car of first-class head lettuce to the market in Denver, such a car sold at $1,000 would net the lucky grower about $750. But where one car sells for $1,000, many cars will very likely not sell to pay expenses. For curiosity sake I wrote to one commission house and made the following proposition:

"I will raise for you five acres of the finest head lettuce, crate it, and load it in iced refrigerator cors. You pay all expenses, including shipping costs, the total not to exceed $250. You must provide the necessary cars at exactly the time I need them, about one every five or six days for five weeks. You pay me over the expenses a sum of $75 an acre for my part of the work. You can have the balance, be it one cent or $500."

This house wrote a nice letter with a big "Nothing doing." All these firms know market conditions. They are composed of shrewd, brainy business men, therefore they will not give you the advantage of making a contract with them at any price. Now $75 above all expenses seems to me a fair profit for the crop from one acre. One acre of head lettuce will fill about one car. When some one tells you of a profit of several hundred dollars for a car of your lettuce, light your pipe and hike away in your woodshed to think it over, before it is too late and you have signed a contract which puts some obligations on you and none on anyone else.

We can produce the best and finest head lettuce so far raised anywhere, and there should be a way to overcome all the present obstacles to marketing. There is one way and only one, which in the end will bring to us the desired goal, and that is organization and cooperation.

Need Marketing Organization.

All over the United States producers of foodstuffs have organized or have started commodity marketing organizations. The fruit growers of California, the dairymen of New York and the New England states, the tobacco and cotton growers of the South, the wheat growers of the Northwest.

Marketing is business. It involves a careful study of commercial conditions and statistics and above all a thorough knowledge of laws of supply and demand. If you raise 1,000 carloads of a crop, especially a perishable crop, and the market has use for only 500 carloads, you are the loser; not the commission house or middleman who handles your crop, but you, the producer. You may not be wronged or cheated by commission houses or middle men, but they are in business for their own profit first and not for yours. Marketing of crops generally is in the most chaotic condition at the present time. Only one concern, the California Fruit Growers' Association, has after long and expensive trials, come to a practical, sound, sane and profitable solution of marketing its products. This came with no help from the Government and in spite of all the rulings and regulations.

How many remember the inflation of the cantaloupe business in the Arkansas Valley about twenty years ago? In the start a few growers of the famous Rocky Ford cantaloupes made very good money. Then came a widespread partly swindling and cheating advertising campaign telling how $300 to $400 an acre could be made growing cantaloupes in the Arkansas Valley. Soon everybody was raising cantaloupes and the bubble collapsed, because 1,000 carloads were raised where only 100 could be sold. If it had not been for the timely arrival of the sugar beet, a lot of good farmers would have lost everything. The same thing happened with Denver cabbage a few years ago.

Must Have Cars When Needed.

Marketing must be divided into two entirely different parts, transportation to the market and selling at the market point. The transportation facilities from the western part of Colorado from the localities suitable to raise head lettuce and other vegetables, to the eastern points are very unsatisfactory. The northern part of the territory is served by the Moffat road. A prayer for its junking is pending now in the courts, and nobody knows what will be the final outcome. The southern part of the state is served by the Denver and Rio Grande Western. W. Headlee from Alamosa has the following to say about this railroad, copied from the Rocky Mountain News of January 21, 1922:

"I lost $10,000 on potatoes last season, 1921, because I could not ship my crop in fall time. When we, the 32,000 inhabitants of the San Luis Valley, asked the railroad for better service and more cars, the railroad said, 'we are broke and in no position to spend any money, though we know you need the cars.'"

Without regular and well organized railroad and transportation facilities, there is no use to talk about raising such highly perishable crops as head lettuce in a commercial way. Potatoes can be stored in your cellars, but Mr. Headlee says: "In the fall I could have sold my potatoes for $1.75 a sack, but as I could not get cars for them, I stored 6,000 sacks in my cellars, and, after caring for them with much work during the whole winter, I could get only 25 cents a sack in the spring. It would have been cheaper not to have dug the crop at all."

Potatoes can be turned into starch, can be dehydrated or distilled into alcohol, if you have the factories near you. With lettuce you can do nothing but feed it to the stock or let it rot on the place when you fail to ship it or sell it at the right time. Right here is the stumbling block of the whole business. As conditions are now and have been for several years, no one can count on a regular traffic over these roads, or on the regular service of a few refrigerator or common cars at the time when they are most needed. You may be able to ship a very few refrigerator cars, but as soon as you need more to move the crop the railroad says: "We are indeed very, very sorry for you, but we cannot help you."

Selling Crop Business Proposition.

Profitable selling of head lettuce should be not so very difficult, provided this phase of the whole business is in the hands of an honest, capable and intelligent man, who is thoroughly acquainted with the season's demand and supply. The selling end is simply business, nothing else. It is not politics nor the business of a small village grocery store, notwithstanding it may have a big name painted on a black sign, "Foolstown Merchandise and Mercantile Co., Coal, Hay, Fruits and Head Lettuce, Wholesale." Brains and honesty must take care of your crop, not politics and incompetence.

Let us not be in too much hurry about this season's crop, but let us organize first, one big association of earnest, intelligent producers and farmers. I would call it the Colorado Western Producers' Association. Let everybody understand, from the United States senators down to the little grocery store politicians that we, the producers, are able and willing to take care of ourselves and our crops. Let us join hands with broadminded, well meaning railroads, commission houses, with chambers of commerce, and honest business associations of this end of our business. In unity is strength. What a small organization cannot accomplish, a big, well organized group of earnest capable farmers can and will do.

Mountain-Raised Vegetables of Superior Quality

GARDENS WHEREVER GROWN MOST RESPONSIVE TO GOOD CULTIVATION

Gordon Kent.

IF there is one thing in which the mountain rancher has the advantage of his brother on the plains it is in the wonderful garden stuff he can raise. At first thought the latter has the best of it because there are many things that cannot be grown in a high altitude climate. Tomatoes and squash, beans and cucumbers, cantaloupes and sweet corn are too sensitive to frost to be practicable above 7,500 feet elevation, except in favored spots, thermal pockets, where the configuration of the land shelters from the wind, provides air drainage, and gives a sunny exposure. Nor can the mountain gardener count on successive sowings in the same space. The season is too short. However, there are plenty of hardy vegetables that will flourish almost up to timber line, and these acquire a flavor and crispness not to be obtained elsewhere.

Mountain-raised cauliflower is a revelation. The heads are rarely larger than a saucer and average less, but a hundred plants will produce more than ninety heads. They will be free from every trace of bug or worm, and when steam-cooked will melt in the mouth. It is better to buy the plants than to attempt to raise them from seed and they should be set out by May 1. The Early Snowball is the best variety.

Head lettuce has been over-advertised lately, though it cannot be over-praised. A good many who are pushing into the head lettuce boom will do better to switch to cauliflower and sidestep the threatened glut of head lettuce and the consequent slump that is now forecast.

Another promising garden crop for the mountain producer is the pea. Mountain peas are so sweet as to take the unaccustomed palate by surprise. They come on the market after the pea season is done in other regions, and command a premium price in city markets. The big grocery companies are the best customers. The Gradus variety is the main crop pea. The Telephone is a little late for cooler sections.

Another commercial vegetable that deserves to be better known and more extensively grown is the rutabaga. The rutabaga produces more heavily than any other root crop and commands as good or a better price. In other words, there is more money in rutabagas than in any other root crop. They are planted in mid-May and harvested in late October. The best prices are to be had from leading hotels. The rutabaga belongs to the cabbage family and will stand a lot of frost in the fall. Although rutabaga is a giant among garden vegetables, weighing from three to twelve pounds, and hardy as a Viking, the seedlings are rather fragile little fellows, and should be given special attention for the first two weeks of their lives. The thinning out must be carefully done. If two rutabagas have to grow where only one ought to fight for a place in the sun, both will be stunted.

For home use the carrot, parsnip, kohl-rabi and turnip deserve more consideration than they get both in the garden and in print. The White Egg is the favorite turnip. Among carrots the Danvers and Chantenay are competitors for head of the class. These roots lend flavor and variety to the winter diet and while not to be classed with the potato as a staple should be served oftener at the family board. All these and the rutabaga should be stored in the root cellar covered with dirt or sand to keep them fresh and plump. If this is not done they lose their moisture content, wrinkle and lose quality and begin to sprout in mid-winter.

Is rhubarb a vegetable or a fruit? As it is used for sauce, pies and preserves, I guess it must be the latter. It does well in the mountain garden and supplements the wild fruits, such as raspberries and gooseberries. It produces so abundantly, requires so little care and is useful in so many ways that it ought to have a place of honor in every mountain garden.

The seed order for a mountain garden will look something like this:

Beets—For greens, Eclipse. Swiss Chard. Carrots—Danvers. Lettuce—Los Angeles Market head lettuce, Black Seeded Simpson. Onion Sets. Parsnips. Peas—Blue Bantam, Gradus, Telephone. Radishes—Early Scarlet Turnip, White Icicle, Large Japanese. Spinach—Viroflay. Turnip—White Egg, Pomeranian. Rutabaga. Cauliflower plants.

The best soil for a mountain garden is the brown loam of the lower slopes. The black soil in the bottoms is utterly useless for vegetables. The yellow soil of upper slopes is too thin, lacking in nitrogen.

A mountain garden very strangely resembles the garden of lower altitudes in its appreciation of elbow grease. The hoe is the best joke you can ever tell a mountain garden and it takes it about two hours to see the point. But when it has seen the point it smiles for a week.

Feed for Production.

A thousand-pound cow will use the equivalent of twenty pounds of silage and eight pounds of alfalfa hay simply for body maintenance. If she is to give milk it must be from feed given in excess of this maintenance requirement. Cows of marked dairy temperament will continue to give milk for a time on a bare maintenance ration, but it is at the expense of their own bodies. They will lose flesh and finally reach a point where they can no longer draw on their bodies for milk production.

It is always economy to feed a cow all the roughage she will eat and it should be of as good quality as possible. Feeding three times a day of roughage will increase its consumption and also its efficiency in production. Grain should be given to cows in proportion to the milk they give. After eating all the roughage they will consume cows of the larger dairy breeds require about one pound of grain for each four or four and a half pounds of milk produced. Small cows require a pound of feed to about three to three and a half pounds of milk given.

Soil Blowing and Some Ways of Circumventing It

ESTABLISHING WINDBREAKS OF TREES ONLY PERMANENT REMEDY

E. R. Parsons.

SOIL blowing can never be completely controlled until the wind-blown districts are planted to trees which serve as windbreaks. In central Kansas about Salina, Beloit and Abilene, we find the farms, many of them, surrounded by beautiful hedges or windbreaks of Osage orange and other varieties of trees. Some of these hedges run for miles and are twenty feet high. This country does not complain of wind blowing like it did fifty years ago. This tree planting, we are glad to see, is gradually working westward, but very slowly.

As soon as a farmer sees that his neighbor can raise a windbreak he thinks that he can do the same, which he undoubtedly can. But there is no reason to wait for this westward march of the trees to reach our own doorways. Why not anticipate it? We grow fruit and every variety of trees without irrigation, then why not plant windbreaks? Many years ago the writer planted a windbreak of black locust at the back of his house in Colorado and another one of silver poplar on the north. Both of these did well, without any irrigation growing some fifteen feet high. The land between the rows was kept well plowed and cultivated and that is all that was necessary. Trees do well under these conditions on any dry farm, because, as we often have explained, dry-land agriculture is mainly a question of depth, and since the roots of trees, even when just planted, reach to a depth of two feet there is practically no chance of their drying out if properly cultivated, and there is nothing easier to cultivate than trees.

Black Locust for Windbreak.

There are few varieties better than the black locust for the greater part of the dry districts. They grow almost anywhere in Colorado, in Wyoming, Nebraska and the sand hills of Kansas. Once established, even if the top dries out, they always come again from the root. When thick enough they can be cut for posts or firewood and will grow right up again. There is no question but that in time nearly every one will have windbreaks and wood lots chiefly of black locust. Why not do it now?

In some of the sand hill districts the Federal Government has had considerable success with the yellow pine. This tree is perfectly hardy and once established cannot be killed by drouth. They have been known to winter successfully with no visible moisture in the soil around their roots. They do well in sandy or gravelly soils, but of course grow more slowly than deciduous trees.

For a windbreak two or three rows are much better than one, and the trees can be aligned so that the interspaces of one row are blocked by the trees of the next row. When planted ten feet apart the distance between rows should be about fifteen feet, but if set closely to form a hedge the space between should be at least twenty feet.

Plant Brush on Sand Hills.

It requires time to raise windbreaks and in the meantime how can the farmer mitigate the soil-blowing nuisance? The blowing of sand from a very troublesome sand hill was once stopped by an enterprising farmer who planted it to sage brush or rather to the native brush which was growing thickly in the hollows. He cut most of the top off the plants and set the roots in the early spring. The crown of the hill was later planted to locusts. That hill is all there and serves as a wind break for the rest of the farm.

Any growth covering the ground will stop the soil from blowing. Many farmers who understand this plant their winter wheat and rye in August instead of October and November, and they go through the winter in the mat protected not only from wind, but from freezing out. The thin stands of these crops when planted late have had no time to stool and are the ones which blow out and freeze out. Land which has no crop on it should be left as rough as possible through the windy period. There is nothing much better than listing for fallow land in this respect, and the soil should not be leveled up and made ready for planting until danger from blowing is considered to be over. It is better to plant late than to take chances of having a newly planted crop blown onto the next farm.

Leaving Grass Strip Through Field.

Some of the farmers of Western Kansas adopted a very good method of leaving strips of prairie grass between their cultivated fields. This is a very good practice on the level, but not of much use on sloping ground. The strips are long but only a few rods wide, and those that are cultivated are about twice as wide as the ones left in grass. The grass is never cut, but allowed to grow tall and bunch up and has a very appreciable effect on the cutting edge of the wind. On the dry farm the intervening strips, instead of being left in grass, may be planted to alfalfa, but this must be done gradually or it also may blow out. Two or three rows are first planted in the center of the grass strips, and when these are established and of sufficient growth to act as a windbreak, the remainder of the strip may be planted. Two cuttings of this crop may usually be taken off and the late growth allowed to remain on the ground for wind protection. Many of the sandy districts have not soil sufficiently strong for alfalfa and in these sweet clover will be found to be an efficient substitute, in fact, some prefer it.

Windbreak of silver poplar grown without irrigation on north side of Parsons' ranch house.

Spreading Straw Checks Blowing.

Hard soils which contain a certain percentage of clay or gumbo never blow as much as the light sandy loams. The staying capacity of these latter is much improved by the addition of humus. Any litter, straw, manure or even weeds on the surface help to hold the dirt. A field which has a cloddy surface will suffer less in a severe wind than one which has been harrowed fine and smooth. Any object helps to break the cutting edge of the wind, whether it be vegetation, clods, furrows or windbreaks. The land must always be worked so that the wind blows across the furrows, not in line with them.

When a bad wind starts to blow out a field, what can the farmer do about it? When this happens there is usually a break in the windward end of the seed bed causing a face or little cliff as the wind blows the loose plowed dirt off the hardpan. This face is like the bank of a creek in flood-time, for as the water cuts it underneath the bank keeps falling in and is carried away by the flood. The wind works much in the same manner, continually cutting away at the face, which is usually the depth of the plowing, until it may happen that the whole field is gone. The remedy is to break up this face with the disk harrow as soon as possible. We believe that the sand hill districts should be planted and looked after by the Forestry Department. It has been claimed by some of their men that yellow pine and some other varieties answer the purpose, but whether this is so or not they can always be planted to native brush, and a sand hill covered with sage brush does not blow. The farmer may be able to control his own soil, but he cannot afford to plant a large area of government land on the windward side of him to protect himself, and there are as many who suffer from their crops being buried in sand as there are who have them blown out.

What and When to Plant.

When the farmer has lived in the windy districts for some time he learns what to plant and, what is more important, when to plant. He also finds that one crop will protect another and that a field of cornstalks, for instance, will afford ample protection for a field of winter wheat just coming through, and so on. But when all is said and done, it will be found that the most satisfactory way of giving the wind its final quietus is the planting of trees, bushes or brush wherever necessary and possible.

Permanent Remedy Is Trees.

It is a common but erroneous idea with many that trees are difficult to grow in the dry-farming districts. The truth is, they are much easier to raise than any crop that the writer knows of. Plow a strip in the fall for trees the next spring if possible, but plowing in the spring will do if there is two feet of moist soil. Plant your trees, cultivate them thoroughly, and just watch them grow.

Learn to Control Drifting of Soil

FARMERS OF PLAINS AREA DEMONSTRATE PREVENTION METHODS.

SOIL blowing is one of the most serious problems with which the Plains farmer has to contend. Professor Alvin Kezer of Colorado Agricultural college points out that the only way to prevent some soils from blowing is to keep them seeded down to grass or clover crops. Sandy lands blow more easily than the so-called hard lands. Soils that are hard enough to crop rather continuously and yet contain considerable sand will blow worse than the tighter soils.

When lands are first broken up from the original sod they are full of root fibers. As long as the root fibers are in the land there is very little trouble from blowing. When the land has been cultivated long enough so that these root fibers are rotted the danger of blowing begins.

Some localities and slopes blow worse than others, no matter what the soil may be. On many of these lands the hope of preventing blowing consists in growing the crop in strips, so that the strips are crosswise the direction of the prevailing winds. Bad soil blowing in some regions can only be prevented by some such scheme. When the surface commences to blow the movement of sand or dust starts to loosen the surface and damage increases from the blowing because of this soil movement. Any scheme which works has to prevent this movement starting.

Planting the crops in strips crosswise the direction of the prevailing winds is only one method of preventing soil movement starting at the surface. Sometimes throwing listed furrows crosswise of the direction of the prevailing winds will prevent the movement from starting. The distance to space the listed furrows will vary with the soil slopes or topography. Keeping the surface soil coarse in texture also helps. A fine dust surface blows worse than a granular surface.

Sometimes one of these methods is sufficient. Sometimes all of them must be used. Some very sandy soils should never be broken up as there is no method of controlling blowing in such very sandy soils in some neighborhoods. These three methods have given some success according to Professor Kezer: Keeping the surface rough, planting strips of cultivated crops through the field crosswise the direction of the prevailing winds and running listed furrows crosswise the direction of the prevailing winds.

County agents of Western Kansas have been working on this problem and their co-operative demonstrations show that the most practical method of counteracting the effect of blowing consisted of running lister furrows at intervals of about twenty feet at right angles to the prevailing wind. The furrows need to be renewed occasionally, and if the weather is unusually dry and windy it is recommended that new lister furrows be run between the first ones. Six men tried this method on 360 acres in Meade county and cut wheat on this land averaging ten to twenty bushels to the acre, while wheat on the other fields of their own and their neighbors was completely destroyed. In fourteen counties in the western part of the state 656 farmers used methods to prevent soil blowing on 8,056 acres.

Watch for Larkspur Poisoning.

Early spring is the time to be on the lookout to avoid larkspur poisoning. The dwarf species starts early. Only cattle and sheep are in danger. The plants are most dangerous immediately after a rain or snow storm, says Dr. Geo. H. Glover of Colorado Agricultural college.

The symptoms of larkspur poisoning are bloating, falling behind the herd, quivering of muscles, heading for a water-hole, following by recovery, or convulsions and death. It requires at least thirty pounds of larkspur to poison a cow. The idea that only the roots are poisonous is a mistake. There is more danger early in the season when the plants are young. The special treatment recommended in Bulletin 385, U. S. Department of Agriculture, is as follows: Physostigmin salicylate, one grain; pilocarpin hydrochlorid, two grains; strychnine sulphate, one-half grain. This mixture is given hypodermically, in one dose, to animals weighing 600 pounds. Experimentally, bleeding has not proven effective.

U. S. Grain Growers, Inc., Planning to Sell Grain

WHOLE POOLERS LOSE OUT IN FACTIONAL ROW AT ANNUAL MEETING

SALES agencies for handling the grain of the 1922 crop produced by its 53,000 members already signed will be established at once by the U. S. Grain Growers, Inc. This action was authorized before the annual meeting which was marred by a bitter factional row between opposing factions of the provisional board of directors elected at the ratification conference a year ago to handle the affairs of the big co-operative grain marketing organization the first year of its existence. Following the first meeting of the newly elected board of directors it is definitely announced that a competent general manager will be employed at once to handle the grain pledged by U. S. G. G. members.

Effort to Oust Gustafson.

An attempt was made at the annual meeting to force out C. H. Gustafson and the row which developed occupied most of the attention of the delegates the first days of the convention. The faction on the board opposed to President Gustafson had gained the upper hand at the last meeting of the board of directors held in January. Gustafson had been charged with being too dilatory in establishing sales agencies for handling the grain pledged. His followers maintained that until a volume of grain was assured it would be useless to set up machinery for marketing grain.

After a four-day convention, characterized at times by heated discussions and dealing in personalities, fifty-six delegates representing 41,790 farmer members of the U. S Grain Growers, Inc., conclusively endorsed the administration of the past year by returning President C. H. Gustafson, Secretary Frank M. Myers and seven other members of the 1921 board to the directorate. President Gustafson received the unanimous ballot of the delegate convention. Secretary Myers received a total vote of 41,784 or one less than the number required for a unanimous ballot.

Factions Retarded Progress.

The petty differences between the factions of the board were early to the fore in the convention, and the American Farm Bureau Federation made the charge that these differences which had entered into the deliberations of the board for most of the year past had resulted in their being tens of thousands of members of U. S. Grain Growers where there should have been hundreds of thousands, and also a deficit instead of a surplus in the treasury.

Fundamental differences of opinion, which had their origin in the Farmers' Marketing Committee of Seventeen and were revealed in their full intensity in the ratification conference held in Chicago on April 6, 7 and 8, 1921, when 103 farmer representatives adopted the plan, was evidenced throughout the past year in the sessions of the board of directors. The intensity of feeling generated on that memorable occasion when a minority element attempted to disregard the recommendations for optional methods of selling grain made by the investigating committee and substitute a plan of compulsory pooling on the floor of the ratification conference, has been kept alive in the board of directors by the representatives of that faction throughout the past year.

At the ratification conference this question of compulsory pooling was discussed for several days and finally defeated by a vote of 61 to 38. Nine of the thirteen Illinois delegates at this ratification meeting voted for the compulsory pool. W. G. Eckhardt of Illinois, director of marketing for the Illinois Agricultural association, was considered one of the leaders of the compulsory pooling group at this conference. He was a member of the Committee of Seventeen and became a director of U. S. Grain Growers and its treasurer for the first year of its existence and head of the organization department.

Crisis in Convention.

The crisis in the convention and in the history of the U. S. Grain Growers came on the second day, just before the election of directors. The old board of directors had districted the membership for the purpose of electing the new board of directors. Seven districts were created and their plan was for the delegates from North Dakota, Minnesota and the Northwest to nominate and elect three directors; Iowa and South Dakota, two; Illinois, five; Wisconsin, Michigan, Indiana and eastward, two; Nebraska, four; Oklahoma, two; Kansas, Missouri, Colorado and westward, two. It provided for one delegate to be elected at large. The resolution from the board was as follows:

"Nominations for directors from a district shall be made by the delegates of the district. Eleven directors shall be elected for a two-year term, ten for a one-year term. Directors for the two-year period shall be selected by delegates from the state or district from which nominations are made, but in no case shall over half the directors of a state or district be nominated for a two-year term, except in such states having only one director."

At this point the scrap between the two factions—one led by Gustafson and the other by Eckhardt—began. The first move was a test vote on a motion by H. C. Filley of Nebraska to revive the discharged rules committee. This resulted in a substantial majority to support a rule which would permit the delegates to elect all directors by a majority vote of all delegates present. It was evident from the test vote that by this method of electing all directors by a majority vote of the whole convention the Gustafson faction would control. By the districting plan a directorate favorable to the opposing faction might be elected. An attempt to iron out differences by compromise failed. The nominations were made from the floor by districts, but the rules adopted permitted all delegates to vote for a full board. The fifty-five accredited delegates present represented 41,790 individual members, the number signed up to January 17.

Nine Directors Re-Elected.

Seven farm paper editors were asked to serve as inspectors of election and after canvassing the ballots the results were announced as follows:

*J. T. Belk, S. D.	41,785	2 yrs.
*C. H. Gustafson, Neb.	41,785	2 yrs.
W. R. Crowther, Mo.	41,785	2 yrs.
A. J. McGinnis, N. D.	41,785	1 yr.
*P. E. Donnell, Mo.	41,785	1 yr.
Robt. Peterson, Ill.	41,785	1 yr.
H. L. Keefe, Neb.	41,785	1 yr.
*F. M. Myers, Iowa	41,784	2 yrs.
C. B. Steward, Neb.	41,665	1 yr.
C. R. Finley, Ill.	40,448	1 yr.
*J. K. Mason, Ind.	39,607	2 yrs.
T. I. Ferris, Ind.	39,319	1 yr.
R. A. Cowles, Ill.	39,020	1 yr.
*F. A. Mudge, Ill.	22,848	2 yrs.
*J. D. Pancake, Colo.	22,844	2 yrs.
*H. C. Lau, Minn.	22,429	1 yr.
A. L. Middleton, Iowa	22,429	2 yrs.
Hans Georgeson, N D.	22,429	2 yrs.
W. B. Jesse, Okla.	22,429	2 yrs.
F. O. Peterson, Kan.	22,429	2 yrs.
*R. N. Clark, Ill.	20,583	1 yr.
C. B. Bigney, Ind.	20,345	
J. R. Howard, Iowa	19,671	
Geo. Earnest, Neb.	19,356	
A. G. Burgeson, N. D.	19,356	
J. L. Reed, Minn.	19,355	
H. G. Jones, Okla.	19,346	
H. W. Avery, Kan.	18,941	
W. G. Eckhardt, Ill.	18,940	
T. M. Jones	167	
*Chas. B. Wright	120	

The twenty-one receiving the largest number of votes were declared elected. The names marker with a * were members of the old board. Hans Georgeson of North Dakota was later found not to be a member of U. S. Grain Growers, Inc., and the new board chose A. G. Burgeson of Douglas, N. D., to fill his place.

A number of amendments to the by-laws, more or less technical in character, were passed. Resolutions were adopted affirming the organization's purpose to carry forward the marketing plan along the lines planned by the Committee of Seventeen and commending the board for what it had done to put the plan in operation. The St. Lawrence waterway project was endorsed. Further reductions in freight rates were recommended until the entire advance of 1920 shall have been eliminated. A resolution suggested "That as far as practicable and consistent with economic conditions the U. S. G. G. be built upon existing farmer-owned elevators and those that may be established. We further recommend to the incoming board that it pursue the same policy as far as possible in establishing farmer-controlled terminal facilities and wherever possible affiliate with existing farmer-controlled agencies under the one general plan."

Inquiry relative to the status of the Farmers' Finance Corporation was answered by President Gustafson with the statement that the War Finance Corporation had for a time taken the place of the farmer agency, but that it was being kept alive for future need.

Treasurer Eckhardt's report showed that U. S. Grain Growers, Inc., had received an income for the first two months of 1922, $28,000 in excess of expenditures. Mr. Eckhardt pointed out that a levy of one-tenth cent a bushel on grain now under contract for five years would pay all the organization and promotion expenses incurred.

Six Directors Refuse to Serve.

Despite the feeling that developed during the convention, harmony marked the first meeting of the new board. Six directors, however, refused to take part in this first meeting, claiming that the wishes of the growers from the various districts had been ignored in the convention and stating that they would not serve on the new board "until such time as the injustice done was remedied." This group met with Aaron Sapiro, California marketing expert, who is being considered as general counsel for the farm bureau in the cotton states. Threats had been made by the minority to withdraw from the U. S. Grain Growers and to call loans advanced to the organization, but Mr. Sapiro advised against this action. The minority group following this meeting issued the following statement: "The decision of the minority delegates from Illinois, North Dakota, Kansas, Oklahoma, Texas, Minnesota and Michigan, representing 46 per cent of the voting strength of the convention, is that they will assure the members they represent that they are determined to market grain co-operatively at the earliest possible moment. This will be done through the sales agency of the U. S. Grain Growers, Inc., if possible. If it is found impossible to restore U. S. G. G. organization to the democratic control of its membership, these states will take immediately steps to create other agencies for marketing grain."

Pancake's Version of Meeting.

"A great many seeing the turmoil of this convention felt that after all farmers could not get together," said J. D. Pancake of Colorado, who was a delegate and was re- (Turn to Page 20)

Breeders Build Sales Pavilion

ELBERT COUNTY LIVESTOCK MEN ARE CO-OPERATING TO DEVELOP COMMUNITY.

G. C. Wheeler.

FROM a charter membership of six or eight breeders representing not more than one hundred registered cattle, the Elbert County Shorthorn Breeders' association has grown to thirty or more members and a thousand registered cattle. Among the men most prominent in getting the breeders of this community to take this most important step might be mentioned Allen Carnahan, C. A. Melburn, A. G. Cornforth, B. H. Gleason, J. Paul and Ralph Jones, and Allen C. Peterson. Mr. Carnahan was the first president of the organization. His son, Dewey Carnahan, is now secretary, and C. A. Melburn, president.

This section has long been known for the Shorthorn cattle grown by its ranchmen in the early days. The father of the Jones brothers already mentioned bought a bunch of registered Shorthorns in 1887, but did not keep up the registration of the increase. For twenty-five years ranchmen and farmers bought bulls of the elder Jones from this foundation stock. Weiss Brothers and L. A. Miller have used registered Shorthorn bulls for thirty-five years and have developed their cattle to such a point of excellence that they have been able to show prize winning feeders at the National Western Stock show for the past three years. The grand champion carload of feeders at the last show came from the Weiss and Miller herds. "In the early days my father began using purebred Shorthorn bulls of Bates, Scotch and Scotch-topped strains," said Fred Weiss, in commenting on the winning load at this year's show. "These calves, of course, were sired by registered Shorthorn bulls."

Many of the members added to the association since it was organized are beginners, having only a few registered animals, in fact, most of them made the start with registered cattle by purchases at association sales. In the four sales held in each of which forty-five to fifty animals were sold, 90 per cent of the heifers have gone to new breeders. Mr. Carnahan, the first president, has been in the business from a purebred standpoint for only six years. He has six sons, all interested with him in the registered cattle business.

In addition to conducting co-operatives sales, the association has done much to promote the general interest of the whole community in better livestock and particularly Shorthorns. It has conducted two sociability tours in which hundreds of Elbert county farmers and their families have taken part. It has been established as an annual feature. The best herds of the community have been visited, talks made at the different farms by the owners and by visiting breeders from other sections who have been with them. This feature has done much to promote the spirit of co-operation and to advertise the community abroad.

An initiation fee of $1 is collected from new members and an annual fee of $2 to carry on the work of the association. Special assessments have never been needed and there has always been money in the treasury for ordinary expenses.

Building a sales pavilion in which to hold sales and meetings was an important step in the life of this active breeders' association. The first sales were held in tents, the rent of the tent with freight amounting to $100. The breeders decided the time had come to put up a permanent building. Breeder members put up from $10 to $100 each. They employed a boss carpenter and did the work themselves. Ten or twelve men might have been seen shingling at one time, all breeders donating their work. Most of the breeders advanced their money for two or three years. Some of the larger breeders put up from $60 to $100 for five years without interest. Most of the short-time loans have been repaid.

The pavilion is 100 feet long. It provides stalls for fifty cattle and will seat 350 persons about the sale ring. A stall rent fee of $3 is collected on each animal sold. This goes to the building fund. The sale expense is covered by collecting a fee of $12.50 per animal. Two entertainments have been put on in the pavilion at which ice cream and other refreshments were served. An improvised stage was erected and various features given, among them being music by the Olinger Highlander band.

The Elbert county livestock sales pavilion is the first of its kind in Colorado. It is an indication of the spirit of progress and co-operation which exists among the breeders of the community. A building of this kind can become a most important factor in promoting the livestock development of any community. Similar buildings in other livestock sections can be looked for as the interest in improved livestock increases.

Market Outlook for Farm and Ranch Products

PRICES SHOW SOME DECLINE, BUT FUTURE CAN BE MADE TO LOOK BRIGHT

Edited by Glenn G. Hayes.

THE last two weeks have not been a period of unalloyed improvement in the farmer's business. Livestock and grain markets were unsettled and lost ground on the whole. But there is a side that can be polished up to look bright. Such periods of hesitation appear in all price movements and in spite of the decline, farm products are selling enough higher than in December to make great improvement in the farmer's position. The advances which have already occurred have done much to lift out of the mire those who were not hopelessly embarassed.

The export trade in farm products in general is much better than expected a year ago, and agriculture is in a better position in that respect than any other industry.

Industrial operations are gradually expanding. Steel mills are now operating at about 70 per cent of capacity compared with 30 per cent, when trade was at its dullest; building contracts awarded are increasing and the greatest growth is in construction for business purposes. Statistics upon total employment in manufactures show a substantial increase compared with a year ago.

The foreign situation is far from hopeless. The decline in German marks to but little more than 1 per cent of their normal value is the logical result of paper money inflation. The invariable history of such a financial policy has been that the depreciated currency is replaced by a new form of money on a sounder basis as soon as the old one nears the zero point in value. To that extent, the decline in German exchange is not distressing.

If European countries can be brought to cut down armament, balance their government budgets, increase their taxes and reduce their issues of paper money, as an outcome of the economic conference at Genoa, a big forward step will have been taken toward restoration of normal world trade to which our prosperity is closely related.

Wheat Outlook Remains Strong.

The outlook for the wheat market remains strong, although prices have been weak most of the time during the last month. Statistical compilations show a close adjustment between probable supply and probable demand for the rest of the crop year, but this fact is obscured by the presence of ample stocks in commercial channels for which there is only an apathetic demand at the present time. Furthermore, statistical calculations have frequently gone awry during the past year and the grain trade is waiting to see whether they will be discredited again.

A dull flour trade and congestion of Canadian wheat at Fort William and Port Arthur as well as along railroads leading to those points have been the principal depressing factors recently. The Canadian situation can hardly be relieved before the opening of navigation, which is expected in about three weeks. The domestic flour trade has an occasional spurt, however, and mills are distributing a fairly large quantity all the time, even when they report that trade is dull. It is estimated, for example, that flour production since July 1 has run over 13,000,000 barrels ahead of the corresponding period a year ago, and throughout March mills were operating at a much higher percentage of capacity than they were last year. In spite of these conditions, stocks of flour are believed to be light. It is chiefly by comparison with the best record during the war years that the flour trade can be considered dull.

Europe is buying a little wheat from North America, chiefly Manitobas, and on a recent day England, France, Germany and Italy all were in the market, and Greece expected to place a large order soon. Clearances from the United States are running around 3,000,000 bushels a week, a rate sufficient to absorb more than our estimated surplus before July 1.

World's shipments have fallen off sharply in the last two weeks, due to a decline in clearances from Australia and the Argentine. Argentine has shipped 51,000,000 bushels since January 1, or nearly half of her estimated surplus. In the same period last year, she cleared only 18,688,000 bushels. There is still enough wheat in the southern hemisphere to maintain a heavy movement for three months if all of it is to be disposed of in that time. This is not likely to occur, however, and Europe will be obliged to resort to North America for a larger fraction of her supply and will probably do so as soon as lake navigation opens.

With smaller world shipments, there has been no difficulty in the last ten days in absorbing the wheat on arrival at European ports, even though about 40 per cent of the quantity afloat was sent abroad on consignment.

Cash markets for wheat have been laggard recently, especially at Kansas City and St. Louis. Kansas City has an unusually large stock of wheat for this season of the year, but most of it is of low grade and there appears to be no pressure of choice wheat on the market anywhere. Even at some of these points where the cash demand was most dull, shipments were actually exceeding the receipts. Large primary receipts constituted one reason for ignoring a probable scarcity of wheat later on, but this factor has gradually changed until primary arrivals for the week ending April 1 were the smallest with three or four exceptions in nearly two years.

Unofficial reports upon the condition of the winter wheat crop range from 78.7 to 79.6 per cent, compared with 76 per cent on December 1, and 91 per cent on April 1 last year. The ten-year average for April 1 is 84.3 per cent. There has not been enough growing weather over most of the winter wheat area to estimate the probable abandonment with any degree of accuracy, but assuming that it is equal to the average of around 10 per cent, these unofficial reports point to a yield of 550,000,000 to 580,000,000 bushels, compared with an average final yield during the last ten years of 570,000,000 bushels. Green bugs are reported to be numerous in Oklahoma and unfavorable reports from Kansas deserve attention. With the world outlook indicating that a large quantity of wheat will be needed for export from the United States during the next year, the market will undoubtedly respond promptly to reports upon the progress of the crop.

Little Corn Being Sold.

Primary receipts of corn are still decreasing, and with three or four exceptions were the lightest last week since early August. The condition of country roads has been one factor. The visible supply decreased 2,707,000 bushels last week. This is a rare event in advance of the opening of navigation. Clearances for export are around 5,000,000 bushels each week. The visible supply is extremely large and in spite of the decrease just noted, is larger than in any previous year. Much of it is winter shelled also, and there is danger that some of it will get out of condition. Much of this grain is at lake ports waiting for lake traffic to begin.

Corn buying is less urgent than a month ago. Export sales have dropped off and industries are curtailing operations while the bins of distributors have been filled.

Oats Market Carries Big Load.

The oats market is laboring under a heavy burden of supplies at terminals and lake ports. The demand for oats is disappointing, although in the last two weeks shipments from primary markets have exceeded arrivals. The oats seeding season has been delayed by wet weather and is one or two weeks late in many sections. Apprehension over the crop may give the market support later on.

Cattle Market Lacks Trend.

The cattle market has shown no definite trend for two weeks. The supply at the seven leading markets has dropped to the lowest level in two months, but the appetite for beef has shrunk likewise, and dressed beef prices have been faltering. Receipts have not been as evenly distributed from day to day as in the previous month, and a few bad breaks have occurred, damage being repaired shortly after. Besides contraction of the demand for beef, stocker and feeder purchases have fallen off temporarily leaving more of the receipts to find the packing house outlet.

The available evidence points to a decrease of 15 to 20 per cent in the supply of cattle in feed lots compared with a year ago, especially when tonnage is considered. The remaining steers are more strongly held than sixty days back and will not be shipped in freely on declines. Texas still reports a slim prospect for grass beef to arrive during the spring months.

Female cattle are going through their spring appreciation in value and are selling unusually close to the price of medium and good steers. This situation usually lasts till June. There is a broad interest in breeding cattle which is helping the cow and heifer market materially.

The veal calf market is becoming more stable and is slightly higher than a week ago, with the movement from dairy districts at or very near its zenith. Many light veals are arriving and are selling at extremely low prices.

Southwestern Pastures to Be Filled.

Transactions involved in moving steers to Oklahoma and Kansas pastures remain mostly in the conversation stage, although some deals are being closed right along. The price of grass seems to be the chief bone of contention and some pasture owners are buying cattle instead of leasing their grazing areas. How heavy the total movement will be is problematical, and estimates are far apart, although available grass probably will be nearly all used.

The northwestern range country also is in the market for grazing cattle, and one observer estimates that War Finance Corporation funds will make possible the movement of about 150,000 head in that direction. Without this money, such purchases would be small indeed.

In the Middle West the movement of stockers and feeders has slowed down slightly since the fat cattle market became unsteady, but the twelve leading markets are still sending nearly 50,000 head country-ward each week, and interest appears to be broadening again. Yearlings suitable for grazing through until grass is ready have the preference.

Hog Slump Checked.

The slump in hog prices appears to have been checked for the time being at least. The range of fluctuations has been narrow recently and the market is higher than a week ago. The fresh pork market has scored a smart advance.

Hog receipts at the eleven leading markets have been running below the ten-year average, although during March they exceeded arrivals of last year, which indicates that hogs were held back to some extent. This is confirmed by the weights of hogs being marketed, which at Chicago are running about ten pounds above the ten-year average.

The shipping outlet, which declined from about 90,000 head a week at Chicago to 35,000 head or less and bears chief responsibility for the slump in prices, widens out occasionally, but thus for has shown no marked improvement.

Prices on lard and salted and pickled meats remain too low to make the packing of these products a profitable enterprise, so that fresh meat trade is the only support and the packers are closing their purses whenever more hogs arrive than are needed to supply the latter demand.

The most important development at the present time bearing on the future of the market is the reported heavy loss of spring pigs. These advices are not unanimous in character, but the great majority indicate that there will be only a small increase in the number of hogs raised compared with a year ago.

Colorados Dominate Lamb Market.

Colorado lamb feeders practically have the market to themselves at present and are keeping well under control. Prices are around the highest of the season and fluctuations are relatively small. The approach of Easter is creating a special demand for light lambs so that the discount on weighty offerings is widening. The decline in wool values has narrowed the difference between shorn offerings and those in the fleece. A few spring lambs are arriving from the Southeast. They are quoted at a range of $13 to $20 at Chicago and Cincinnati. A few California lambs are scheduled to arrive in April, but they will not come freely until May. Some lamb feeders are already contracting thin Westerns to be delivered next summer and fall at prices considerably below the present market, but much higher than those paid last year.

Eastern Farms After Horses.

Another heavy run of horses was cleared at Chicago, mostly to dealers catering to the eastern farm trade. Good chunks weighing 1,300 to 1,600 pounds sold at $125 to $200 a head, and a few choice drafters sold for $250 or higher. Wet weather is delaying spring seeding operations and may cause a rush for extra horses later on. It has had the opposite effect on Southern buying, however, and prices at St. Louis, the principal gateway for the Southern trade, were $10 to $15 lower on both horses and mules. Coal mine labor troubles also were a factor in the mule market.

Cash Grain Markets.

The range of cash grain prices follow:

Kansas City: Wheat—No. 2 hard, $1.20@1.50; No. 3, $1.20@1.42; No. 4, $1.20@1.38.

Corn—No. 2 mixed, 51½@52½c; No. 3, 52½@54½c; No. 4, 51½@53½c.

Oats—No. 3 white, 35@36½c.

Barley—53@55c.

Hay Market Higher.

Hay markets have advanced slightly in the last week or two, due primarily to light receipts, as the demand is narrow and limited mostly to local buyers. Unseasonable weather is delaying the progress of the new crop in the Southwest, but it is probable that lower prices will be seen after another month or two, when pasture becomes generally available.

Egg Slump Is Over.

The egg market has been fluctuating over a limited range and the slump in prices appears to be practically over. Receipts are increasing rather steadily and are now about 30 per cent larger than two years ago. They usually reach high water

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This twenty-ear exhibit of Minnesota 13 corn shown in the Colorado State Farm Bureau Corn show at the National Western Stock show won the Western Farm Life trophy cup offered for best twenty ears of corn grown in Colorado. The exhibitor was F. D. Yeager, county agent of Boulder county. Six counties were in the competition for this cup. Second place went to County Agent Ben King, Montrose county; third to Raymond Miller, Douglas county; fourth to W. F. Droge, Otero county, and fifth to R. P. McCann, Mesa county. Competition was open to county agents only.

WESTERN FARM LIFE

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What About the State Farm Bureau?

In this issue the Colorado State Farm Bureau sets forth its claim for support through the article by F. R. Lamb, state secretary. Mr. Lamb has been acting secretary for some months, but now has made arrangements to give up his farm and devote his whole time to the farm bureau organization.

Western Farm Life believes in the farm bureau as an organization with great possibilities for good to the farmer. An organization, nation-wide in its scope, with more than a million and a half farmer members, must claim the attention of every thinking farmer. As an individual a farmer can raise his crops and handle his livestock efficiently without much assistance, but when it comes to selling them he must deal with big concerns, all of which know vastly more about marketing than he does. The farm bureau which you are being asked to join and actively support is taking the lead in forming farmer marketing organizations which propose to put the farmer on an equality in selling with other business men.

Do Not Overlook Feeders' Day.

Every livestock farmer should mark April 28 and 29 in his calendar for a trip to Fort Collins to study the experiment station in action and get the results of the winter's feeding tests. If you have been a knocker on experimental work and have felt that you were not getting good value for the money and effort spent in the endeavor to solve some of the difficult problems of your business, be open-minded enough to make a trip to the station and study firsthand what is being done and brush elbows with the men doing this work for you.

Are you sure you understand why an experiment to be of value must be conducted with the greatest accuracy? Ars you perhaps assuming that because the animals have to be weighed frequently, all feed weighed and a thousand and one little things done which makes experimental work expensive, that you are expected to consider all these little details as something the experiment station men recommend you to do? If this is your idea you have not understood the why of a carefully conducted experiment. The exact facts are the end toward which every experimental test is directed. It costs a great deal more to get these facts with accuracy than the average feeder can afford to spend. The details of getting the facts are of little importance to the feeder except that he wants to have confidence in the results. Having the facts, arrived at in the exact manner of the carefully planned and conducted experiment, the feeder has but to take them and adapt them to the practical problems of his farm and feed lots.

Experiments the results of which will be of great value to livestock farmers of the state are being conducted by Professor George E. Morton and his assistants. They are your servants and nothing would please them better than to have livestock farmers from all sections of the state come to the station and minutely inspect the work which they are doing. Remember the dates—April 28 and 29.

No Store Bills to Pay.

A young farmer in the Johnstown dairy district of Colorado recently dropped into his bank, presented a big milk check and announced that he wanted to pay off his note. The banker asked if he didn't want to keep back part of it to pay the merchants. "They will appreciate it if you do," said the banker. "Why, I don't owe them any bills," replied the young man. "I'm dairying."

This is an old story in a district where milking cows is part of the farm business. The cream or milk checks insure the farmer against adverse weather conditions, unprofitable markets for crops and other unfavorable conditions. Whether in the irrigated districts or on the dry lands of the plains area the dairy cow is always there with her product whatever happens. Day after day she goes on converting farm-grown feeds into a highly finished product which always finds a ready market.

It is the day after day feature which counts. One-crop farmers who become accustomed to having more or less freedom during the year are sometimes disposed to poke fun at the man having cows to milk. When they walk into the bank or are compelled to face accumulated bills at the stores it doesn't seem so funny. The man who has steadily done the necessary chores connected with handling a few milk cows usually is the one who can look the merchant or banker square in the eye, for the steady income from the cows and his work performed regularly throughout the year has kept him out of debt. When he sells his potatoes or wheat or whatever may be his main cash crop, he is not compelled to see the returns melt away until nothing remains for the additional equipment or working capital needed in the business.

Do Not Neglect the Pigs.

According to estimates of the United States Department of Agriculture, about 17 per cent more sows were bred in the six months from September, 1921, to February, 1922, than during the corresponding months of the previous year. This would indicate a greatly increased spring crop of pigs. It is no more possible to count the pigs before they come than it is possible or wise to count chickens before they are hatched. The pigs have not materialized as expected.

From all sections of the Middle West come disappointing reports of the spring pig crop. Pigs have been born dead, undersized, and weak, litters have been small and many pigs have died soon after birth. Various reasons have been assigned by those endeavoring to explain the small turnout of spring pigs, the most common of which is that the cheapness of corn and scarcity of money caused farmers generally to overfeed on this cheap grain, refraining from buying the necessary supplements, and as a result sows came to farrowing in anything but ideal condition. Pigs valued at more than $50,000,000 have died this spring, say J. B. Winchester and J. S. Hughes, nutrition experts at the Kansas experiment station, from disease due to lack of vitamines in their rations or the rations of the sows. This they attribute to feeding too much corn.

Whatever the couse, the Colorado and mountain states hog growers who perhaps have felt a little uncertain of their wisdom in breeding so many sows as reports came to them of the scramble to get into hogs all over the country, can take this condition as a hunch to give their pigs the best of care and endeavor to carry as large a percentage of them through to market as possible. In other words, the excessive production of pork predicted may not be as great as the earlier reports might indicate.

In the mountain states hog men have learned the value of alfalfa hay, plenty of pasture, and exercise, as factors in getting the pigs started right, as was evidenced by the letters sent to Western Farm Life on pork production and published in our March 15 issue. Haying the hogs is a regular practice of Colorado farmers, for they have learned that pigs from brood sows having free access to alfalfa hay through the gestation period are born with the appetites and vigor of wolves and need little coddling to get them started on the route to the park barrel.

Our hog men should do their utmost to take advantage of the disappointing returns from the spring farrow concerning which we are hearing to much in the sections of large pork production. Every pig lost through carelessness or neglect adds to the overhead of the business. It is the big litter, every one saved and carried through to market, that carries the minimum of overhead expense to be paid from the gross returns.

Parsons on Soil Blowing.

Trees and windbreaks as the only permanent means of lessening the damage from drifting soil is the text of E. R. Parsons' article in this issue. He makes an appeal for tree planting which we hope many of our readers in the plains regions will heed. The gradual movement westward of permanent plantations of trees and shelter belts is most exceedingly slow. Why not get busy this spring and grease the wheels of progress along this line a little by putting out some trees and shrubs and having done so, above all things do not neglect them.

Head Lettuce Must Have Quality.

Are we going to overdo the head lettuce business in the mountain states? Many growers are asking themselves this question following the rush to increase the acreage of the lettuce crop this year. Some of the difficulties and conditions with which the grower must contend are set forth in this issue by C. J. Meyer of the Middle Park section.

Quality must be the basis of the mountain lettuce business. The grower must never forget that this lettuce comes on the market at a season when practically every state in the Union can produce head lettuce such as it is. California head lettuce comes during the winter season and a market has been found for 10,000 cars annually. The same consumers will eat head lettuce during the season when the mountain lettuce is available even more readily than during the winter season, but it must have the quality which can be obtained only in lettuce grown under mountain conditions and by those who have made a study of its production. Sending a lot of head lettuce to market no better than can be obtained from local sources is the surest way to kill the business of producing real mountain head lettuce. There will be no repeat orders from a dealer who has been stung by a car of just common head lettuce such as he had been obtaining much nearer home.

The forming of growers' organizations for the purpose of making this matter of quality the foundation of the business is certainly to be commended. Producing a quality crop, standardized and controlled so that no inferior shipments can get out, will be the next development in this business or there will be a slump and a lot of growers who rushed in without an understanding of all the conditions of growing and marketing the crop will suffer loss.

According to the estimates, about 5,000 acres of head lettuce will be put out in Colorado this year. Last year the acreage was 1,400, and in 1920 it was 300 acres. It is estimated that around five hundred cars will be shipped from Idaho this year.

Will the Breach Be Healed?

Delegates of the minority faction at the recent U. S. Grain Growers' annual meeting assured the individual members they represented that they were determined to market grain co-operatively through the Grain Growers' sales agency if possible. This was set forth in a formal statement at a conference of these delegates immediately following the meeting. Of course, the statement had some conditions relative to the matter of control of the big marketing organization, but the statement may be taken as more or less of a referendum to the individual membership represented by these minority delegates. If the members in large numbers say, "Go on with the fight to the last ditch, even if it breaks up the whole organization into disgruntled factions," nothing better could be asked by the interests now striving to discredit the big farmer movement to control the marketing of their own grain. The manner in which the news of the convention was handled by the daily press of the country shows the hope of the enemies of co-operative marketing that the whole thing will blow up in a row.

The necessity for submerging individual differences and working together in spite of clashes between men of strong personalities has been learned far better by big business organizations than by farmer organizations. Let us hope that this spirit will prevail in the membership of the biggest and most promising movement ever started in the interests of agriculture.

Incomplete reports from the field show an increase in membership during the convention period of 2,560 members, bringing the total to 55,286. The farmers' co-operative elevator at Center, Iowa, which did a business of $1,900,000 in 1920, was among the elevators signing five-year contracts. This contract was taken by T. A. Haugas, former president of the Iowa Farmers' Union. An account of the annual meeting of U. S. Grain Growers, Inc., appears in this issue, also a statement of progress in the matter of establishing a sales agency to handle grain pledged by members.

From the Nation's Capital

FORTY MILLION ADDITIONAL LOANS TO BE AVAILABLE TO FARMERS PREDICTED.

E. E. Reynolds.

THE joint stock land banks have made all the loans they can until permitted to increase their capital stock. A resolution was adopted by the recent National Agricultural Conference in Washington, recommending that Congress amend the Federal Farm Loan Act to permit the joint stock land banks to issue bonds in the amount of twenty times their capital, the same as the Federal land banks are permitted to issue. Such a bill is soon to be introduced in Congress. If this measure passes, the existing joint stock land banks will be able to make $40,000,000 of additional loans to farmers at once, without waiting to increase their capital stock. The bill has the endorsement of the Federal Farm Loan Board, and it is favored by the farm blocs in the House and Senate, making its early enactment reasonably sure. The assets of all the joint stock land banks amount to $115,000,000.

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Tariff and Bonus Bills Have Attention in Congress.—After the tariff the bonus, and after the bonus adjournment. This will be the program of Congress, unless all signs fail. Congressmen and senators are convinced that something will have to be done with the tariff and bonus before they can safely face their constituents, and they are willing to devote their time to these bills, regardless of other much needed legislation.

The tariff still has a hard and weary road to travel. The debates will be lengthy. Heretofore no tariff bill has been enacted in less than four months after it was reported in the Senate, and if this precedent holds true as regards the present bill, it will be well into August before it gets out of conference and is ready for the President's signature.

Tariff hearings before the Senate Finance Committee have been in progress for a long time. Long after the open hearings were discontinued, several interests were given special hearings to present their various cases. The dairy interests have been demanding a protective tariff an vegetable oils from the Orient. The soap manufacturers have been equally insistent that a tariff on vegetable oils will ruin their industry. Senator Smoot of Utah finally suggested a compromise tariff rate of 4 cents a pound on all Oriental vegetable oils, with a rebate to the manufacturers equal to the tariff rate on such vegetable oils as are used in the manufacture of soap and other non-edible products. At first sight this proposition seemed plausible to some of the dairy people, but a close-up view of the scheme led to the belief that the soap manufacturers would confine their purchases to the cheaper imported oils, leaving American vegetable oil producers to supply the limited demand for vegetable oils used in food products.

With the dairy organization representatives unwilling to accept such a deal, and the domestic vegetable oil interests storming the committee in opposition, a modified compromise was proposed, which would limit the rebate to imported vegetable oils used in the manufacture of soaps and other products for export.

At the eleventh hour the honey producers awoke to the realization that they are in need of protection against cheap honey from the tropics. The Fordney bill which passed the House provided a rate of 2½ cents a pound on honey. The farm organizations asked for 4 cents a pound in the Senate hearings, and secured a 3-cent a pound rate.

A few days ago the Fremont County Bee Keepers' association of Lander, Wyo., petitioned the committee, through the American Farm Bureau Federation Washington representative, to increase the duty on honey to 5 cents a pound.

It was stated that the Wyoming beekeepers produce tons of "water white" honey of especially fine flavor. This honey is much used in blending with honey from Central and South America. The honey from the tropics is secured by robbing bee trees. It is imported in cans and sold at 3 cents a pound. The Wyoming beekeepers have to pay a much higher transportation rate, and therefore believe that they are entitled to a high protective tariff on honey.

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Farm Bureau Asks for More Funds to Fight Black Wheat Rust.—The American Farm Bureau Federation is asking for an appropriation of $500,000 to speed up the fight against the black wheat rust, which is spread by the barberry bush. The federation officials estimate that delay in rust eradication work will cost the growers of wheat and the millers and consumers of bread billions of dollars.

The present Federal appropriation is $147,000, which provides for clean-up work that will require ten or twelve years to complete the barberry eradication, but if it is increased to $500,000 annually for three or four years, the barberry can be controlled and probably eradicated in the wheat growing states. Arguments made before the sub-committee on agricultural appropriations by Farm Bureau representatives from several western states were to the effect that it is urgently necessary that this menace to the wheat crop be removed, as the barberry grows wild in the wheat states and spreads rapidly. It is claimed that spores of the wheat rust had been found by aeroplane as high as 10,000 feet in the air, and that a single bush may infect 1,000 square miles of wheat growing territory. Dr. E. C. Stakman of the Minnesota university farm said the barberry which was introduced as an ornamental shrub, has become a common plant in the Central West. A survey covering 62,000 square miles made by the Department of Agriculture, has located over 5,800,000 bushes.

Dr. Stakman also said that the total damage estimated by the Department of Agriculture from 1916 to 1920, caused by rust in wheat, was 333,000,000 bushels; oats, 258,000,000, and barley 50,000,000 bushels. In Minnesota the yield was reduced from 17.5 bushels in 1915 to 7 bushels in 1916.

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Secretary Wallace Praises Federal Highway Act.—The Federal aid to roads bill has been improved by the addition of a provision for the construction of underpasses. At present no special provision is made for constructing highways under railroads. In the construction of roads in future wherever possible grade crossings will be eliminated.

Secretary of Agriculture Henry C. Wallace had much to say in praise of the Federal Highway act passed last year, in a statement before the House Committee on Roads. Speaking of the fact that Federal aid to roads had been the means of developing a more economical and uniform system of road building, Secretary Wallace said that in his judgment the amount saved, which before was wasted, amounted to more than the Federal aid. "This whole scheme, while we speak of the fact that the government is spending a very substantial portion of the money for road building in the states, tends to better roads, more economy in building, and helps us get more for the money which the taxpayers pay."

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Fight is On Over Congressional Free Seeds.—The perennial fight over Congressional free seeds is now on. The House passed the agricultural appropriation bill with $360,000 for the free seed distribution. The Senate appropriations committee, handling the agricultural appropriations, voted 4 to 3 to strike from the bill this free seed appropriation, and majority members are confident that their action will be endorsed by the Senate. This will throw the fight into the conference with the probable result that it will be retained in the bill.

The Congressional free seed appropriation is annually opposed by the

(Turn to Page 15.)

THEY CONQUER THE MUDDIEST ROADS

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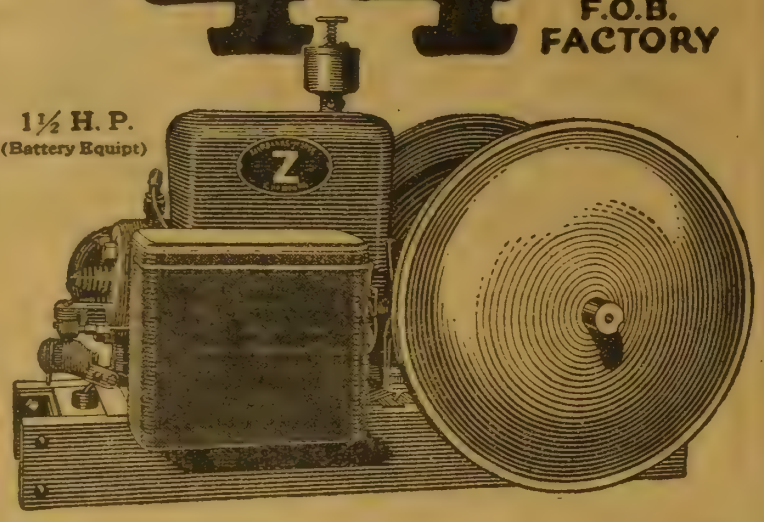

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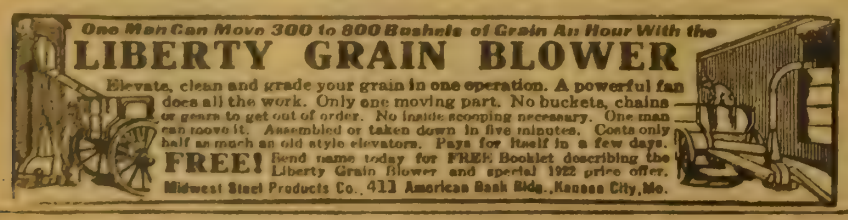

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DENVER, COLORADO.

State Farm Bureau Program

POLICIES, AIMS AND ACTIVITIES OF COLORADO ORGANIZATION OUTLINED.

F. R. Lamb, State Secretary.

IT is as a service organization that the Colorado State Farm Bureau lays claim to the support of the progressive farmers of the state. It is working for the agricultural and industrial welfare of Colorado, and is the connecting link between the farmers of the counties and the American Farm Bureau Federation. Its policies are determined by the individual farmers through their county and community farm bureau organizations. Its aim is to render the most effective service possible to its individual members on problems of statewide importance, and to co-operate to the fullest extent with other state farm bureaus and the American Farm Bureau Federation in working out state and national problems affecting agriculture as a whole.

In its attempt to render this service the Colorado State Farm Bureau maintains an attitude of co-operation toward all other organizations which are working for the common good. It fully recognizes the absolute necessity of co-operation among farmers and farmer organizations, and has no time nor desire to consider any other policy.

Program of Work for 1922.

At the last annual meeting of the Colorado Farm Bureau held in Fort Collins it was decided that an active membership campaign be conducted this year. The first essential of any organization is a sufficient membership to make its work effective. In the work that the Colorado State Farm Bureau is doing and proposes to do it is reasonable to assume that it merits the support of a fair proportion of the 50,000 farmers of the state. Therefore, the membership campaign was made the first and most important project of the year ahead.

It was considered that general information on the activities of the organization should be made available to farmers of the state. The executive committee was empowered to employ a suitable person to assemble this information and see that it be given out.

Other recommended activities of the organization adopted at the annual meeting were those relating to marketing farm products, the putting on of a state grain show, matters of legislation affecting agriculture and any other similar activities that might develop.

In the matter of taxation, a committee was appointed and authorized to make a complete survey of the taxation situation throughout the state.

Another project of importance to be worked out is that of co-operative selling of feeder cattle direct to the farm bureau members of other states. Ohio alone will be in the market for from 50,000 to 100,000 feeder cattle this fall. A complete list of all cattle for sale in Colorado will be made by counties. This list will facilitate the movement of feeders to the different feed lots of Colorado as well as to those of eastern states. Other marketing projects will be worked out as they come up.

Membership Campaign Under Way.

Realizing that all activities of the organization depend on building up a much larger membership, the executive committee at their first meeting laid plans for a state-wide membership campaign, under the direction of J. M. Rodgers of Wellington, in co-operation with field men from the American Farm Bureau Federation. At the present time this membership campaign is being conducted in Larimer, Boulder, Adams and El Paso counties under the direction of Charles G. Stonebreaker of Iowa and Mr. Rodgers. Preliminary work has been started in Pueblo and Weld counties and will be taken to other counties in the near future.

Reports show that more than 90 per cent of the farmers solicited have joined the farm bureaus in these counties. Up to this time the membership work has gone a little slower than was expected, due to the scarcity of good farmer solicitors. New men are rapidly being added to the force and it is expected that a good bunch will be at work soon.

A state office has been established in Fort Collins and will be in charge of a paid secretary on full time, who will issue regular reports to the members and keep the public informed of the activities of the organization through the press.

A complete survey of the present status of all co-operative organizations in the state has been made and forwarded to the American Farm Bureau Federation headquarters in Chicago as part of a nation-wide program to utilize to the fullest extent possible all the co-operative machinery now available. A careful study will be made in this state of the problems involved in working out a successful plan for the co-operative marketing of all farm products.

Plans are being perfected for putting on a state farm bureau grain show as an outcome of the successful corn show which has been held for the past two years in connection with the National Western Stock show in Denver. In connection with this grain show it is proposed to organize a state seed growers' association.

Legislative and Taxation Problems.

Legislative problems of Colorado farmers will be presented to the state legislature at the proper time by a legislative committee of the state farm bureau. Taxation is a national problem at the present time and is of particular interest to farmers of Colorado. The taxation committee of the state farm bureau is now gathering first hand information on matters of taxation from the various counties of the state. From this information recommendations will be presented to the proper authorities for relief measures. Information already obtained shows that there is need for concerted action by the farmers of the state if an equitable solution is to be expected. Several counties already have held mass meetings and have made definite recommendations to the state farm bureau relative to their taxation problems. After all the reports have been compared and carefully studied, an expert on taxation will be employed to help work out some state-wide measures affording relief from the present excessive taxation burdens.

In addition to the foregoing activities of the Colorado State Farm Bureau, efforts are being made to co-operate with other organizations in working out farm problems as they are presented.

Individual Farmers Must Help.

The amount of service that the Colorado State Farm Bureau will be able to render depends on the support it gets from individual farmers. The success of the membership campaign now under way and the moral support that the bureau receives from farmers of the state are vital factors in the carrying out of its proposed program. It is, therefore, the duty of the farmers of Colorado to acquaint themselves with what the farm bureau is doing and can do, to attend all local and county meetings, and to aid in every way possible in carrying out the policies and activities of the organization.

The community and county organizations form the foundation of the farm bureau structure. Your state farm bureau must look to the individual farmer for support and guidance. Your individual efforts and support or your indifference will make or break your organization. If upon investigation you feel that the farm bureau merits your support it is most assuredly your duty to join the county organization at your first opportunity.

Agricultural Conference Report.

The report of the National Agricultural conference as made by Secretary of Agriculture Wallace to President Harding is to be issued as a public document. President Harding transmitted the report to the agricultural committee of the House, which presented it to the House with the recommendation that it be printed as a public document. The House approved the recommendation. The publication will contain the addresses delivered before the conference and the reports of the various committees. Persons who are interested may obtain copies of the document through their congressmen.

Barley seeded in on a poor stand of winter wheat makes a poor crop for market, but may make a good feed crop.

Grain Growers Sales Company.

Grain will be handled and sold co-operatively in the principal markets adjacent to the territory in which the 55,000 members of U. S. Grain Growers live within ninety days, say officers of the newly formed co-operative firm. The first offices to be set up will be in the Chicago, Omaha and Minneapolis markets, and efforts then will be directed toward establishing selling agencies in Kansas City and Indianapolis markets.

The U. S. Grain Growers' Sales Company, subsidiary of the marketing association, is under the direction of the executive officers of the U. S. Grain Growers, Inc., so that they may supervise the details of getting the machinery in working order without creating additional salaried positions. Employment of a high type executive of experience, who will be placed in charge of the actual operations of the company, and sub-executives for the branch agencies is being given attention at the present time. The grain already contracted by the present membership of U. S. Grain Growers will approximate 125,000,000 bushels for the year 1922, which will give this agency a volume of business greater than that handled by any other grain firm in the world.

May Own Terminal Facilities.

"The articles of incorporation of the sales company are broad enough to provide means of selling for export or ownership of warehousing facilities on the terminal markets," according to a statement made by President C. H. Gustafson, Secretary Frank M. Myers and Vice President James K. Mason of the farmers' company. "Likewise, it will be able to finance movement of grain to the same extent as other grain firms in the markets do at the present time.

"Members of the U. S. Grain Growers will in reality have two methods of controlling the sales company under the form of organization which has been adopted. First, they have direct control of the U. S. Grain Growers, Inc., itself through membership and election of the directors who will be primarily responsible for its management. Second, they will have another line of control in the capacity of stockholders of the company or through stock ownership in local elevators whom it is expected will own the principal part of the preferred stock of the sales company."

Elevators to Hold Voting Stock.

Control of the selling organization through voting stock is vested in both common and preferred stock. Issues of $125,000 of each class of stock of $100 denomination will be prepared forthwith and the preferred issue sold to farmers' co-operative elevators and individual members of the U. S. Grain Growers, Inc., while the common stock will be held by or for the parent organization. Preferred stock will return a 7 per cent cumulative dividend which must be paid before a dividend can be declared on the common. The preferred, likewise, is redeemable at 10 per cent above par and must be offered first to the U. S. Grain Growers, Inc., whenever the original purchaser wishes to sell.

Method of Operation Simple.

A feature of the new organization emphasized by the Grain Grower officers is that the affiliated farmers' elevators may ship direct to the market center which offers the most favorable prices. All savings will be cleared from the general office in Chicago, so that business may be transacted with any or all branch agencies without complicating this procedure.

Commissions and earnings realized by the selling company as declared dividends on the common stock, held by or for the U. S. Grain Growers, Inc., will be returned with other profits realized by the farmers' company to the affiliated elevators for distribution to Grain Grower members on the basis of amount of grain sold through the association. In this way, the co-operative idea will be carried out in every detail and yet the business will have been conducted in the manner customary and usual at the present time.

Local advisory boards, appointed from the responsible officers of farmers' elevators and Grain Growers' associations in territory tributary to each branch office, are required under the by-laws of the sales company. These boards will represent the viewpoint of their particular marketing zone in advising the management and directorate with respect to sectional problems and policies.

Action taken by the United States Supreme Court on the Capper-Tincher bill, known as the Future Trading Act, will not affect the operation of the subsidiary selling company either way, it is believed. The form of organization which has been adopted would be desirable whether or not the Futures Trading Act is declared unconstitutional, the farmer officials point out, inasmuch as the Omaha, Milwaukee and other grain exchanges have not made application for designation as contract markets under the act, which specifically affects only those markets where trading in grain futures is carried on.

To Have Radio News Service.

The Department of Information of the American Farm Bureau Federation has arranged for Westinghouse to broadcast from Chicago every day at 6:30 p. m., agricultural news. The use of this news service has been offered to the Illinois Agricultural association, National Live Stock Producers' association and the U. S. Grain Growers, Inc.

Jamieson Helps in Washington.

W. G. Jamieson, formerly president of the Colorado State Farm Bureau and member of the Executive Committee of the American Farm Bureau Federation, has been spending some weeks in Washington, where he effectively presented the viewpoint of western farmers relative to transportation, finance and other problems of great importance to agriculture. Mr. Jamison attended the National Agricultural Conference in Washington, January 23—27, upon the invitation of Secretary of Agriculture Henry C. Wallace. He remained there until the middle of March as a member of the advisory committee to the Congressional Joint Commission of Agricultural Inquiry. He has rendered particularly effective service.

Purebred Sire Contest Starts.

Four El Paso county communities have entered the purebred sire contest being put on in that county. They are Hanover, Fountain, Monument and Calhan. "Every community in the county entered," is the goal the county farm bureau has set. It is not too late to enter yet and communities not in should report to County Agent J. C. Hale, or O. F. Dickson, chairman of the committee in charge. Credit will be given for any purebred brought into the community and for any registered sire of breeding age that is purchased within the community to replace scrubs.

Prizes for Summer Fallowing.

Farmers in the dry-land sections of Weld county are to have the opporunity to compete for a series of cash prizes to be given to those getting the best results in growing wheat by the summer tillage method of conserving soil moisture. Business men of Grover are putting up the money. A first prize of $50 will go to the man producing the highest yield by this method, and $40 to the one with the next highest yield.

Fields entered in the contest must contain at least twenty acres. A committee composed of the contestants will measure and stake the fields. Each contestant is to keep a record of all costs to be figured as follows: On old ground—Plowing, $2.50 an acre; drilling, 50 cents; harrowing, 25 cents; single disking, 50 cents; double disking, 85 cents; cultivating, 50 cents. On sod—Plowing, $3.50; double disking, $1.10, and single disking, 60 cents.

All the work is to be done under the direction of the county agent, M. E. Knapp. A demonstration in raising potatoes under summer tillage methods also is to be conducted on a two-acre tract on the E. D. Stinson ranch near Grover.

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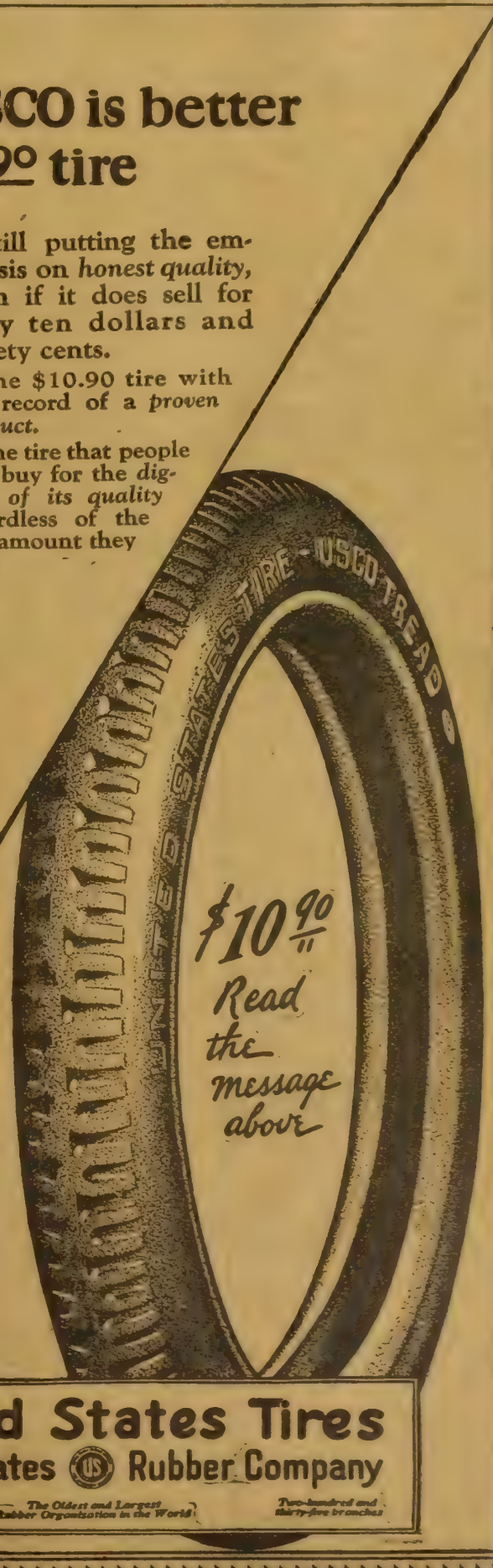

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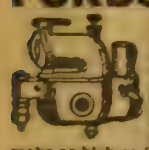

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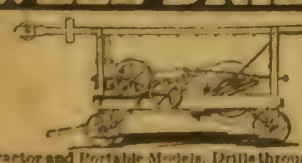

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Farmers' Service Bureau

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Will Water Hemlock Poison Hogs?

Is water hemlock fatal to hogs?—J. C., Nevada.

Authorities on the subject of poisonous plants state that water hemlock is very poisonous to all animals, but do not specifically mention hogs. I have no information on this point, but I certainly would not care to take any chances in permitting hogs to eat the roots of this plant.—G. C. W.

May Sue for Wages.

I made a contract with a neighbor to irrigate and put up his crop of hay in 1920, and the work was done and the hay was measured and everything seemed to be all O. K. when we figured up. He paid me part of the money at the time and has made two small payments since and has promised to pay the balance, but has failed to do so two or three times. According to law, can I collect this balance and when is it outlawed, or what proceeding can I take for collecting my money? The contract was only a verbal one to start with, but I had a partner as a witness.—Subscriber, Colorado.

You may bring a law suit against him for the remainder due. The suit will be barred six years after the last payment. —Hamlet J. Barry, 726 Equitable Bldg., Denver.

Shorthorns or Red Polled.

What do you think about the Polled Durham and Red Polled cattle? Which breed is best for milk and butterfat.—P. N., Pueblo county, Colo.

Polled Durhams are now officially known as Polled Shorthorns. They are usually good milkers as well as good beef cattle. The Red Polled cattle have long been considered a dual purpose breed, and taking the breed as a whole are probably better milkers than the Shorthorns. There is now a strain of Shorthorns known as Milking Shorthorns. Breeders developing this strain are endeavoring to bring about a more uniform milk production than is found in the breed as a whole. The Red Polled are not quite so large as the Shorthorns. —G. C. W.

Damage From Irrigation Ditch.

For three years I have been asking the owners of an irrigation ditch through my place to take care of it, but they have not done so. In places the ditch is seven feet deep and ten feet wide. During that period it has washed from two to six feet deeper and it has caved in my own ditch which I used for irrigation. They could get their water without taking it through my place, in another way, by diking a little at the highest place. Can I stop them from taking water through my place?—E. H. K., Pueblo county, Colo.

This is a question partly of law and partly of fact and the answer would have to take into consideration all facts relating to the situation. You do not state whether the owners of the ditch in question have ever acquired, in any manner whatsoever, a right of way for their ditch. If they have the conditions affecting the holding of that right of way should also be known. Speaking generally, you should, under such conditions as you describe, be able to compel the parties injuring you to pay you for all damages done and keep their ditch in a good state of repair, but it might be possible that the damage resulted from great floods that could not have been guarded against, in which case you might not have any recourse if the owners of the ditch own the right of way.

I recommend that you consult with some competent attorney with whom you can discuss all of the facts, as this case would probably have to be settled in the courts unless an agreement could be reached.—A. Lincoln Fellows, Irrigation Engineer.

Treating Seed Potatoes.

How are seed potatoes treated to prevent scab? Also treatment of seed corn to prevent smut.—J. R. L., Kiowa county, Colo.

There is no method of treating seed corn for the prevention of smut. The spores of corn smut are found in the soil of the fields where corn has been grown.

For treating seed potatoes, prepare a solution in a wooden container, using four ounces of corrosive sublimate or mercuric chloride dissolved in thirty gallons of water. The chloride does not dissolve readily in cold water, so it is advisable to use several gallons of hot water at first, adding the necessary amount of cold water after it has been dissolved. The potatoes should be treated before cutting by soaking them from one and one-half to two hours in this solution. This will control all skin diseases such as Rhizoctonia (black-scurf) blackleg and common scab. It will not control any of the Fusarium wilt or dry-rot diseases. Any tubers showing brownish or ring-form splotches when cut should be thrown out as unfit for seed purposes.

This solution is a deadly poison and every precaution should be taken to keep stock from getting to it. One batch is good for two or three dippings, after which a new solution should be prepared. The foregoing instructions are those given by the department of horticulture of Colorado Agricultural college.—G. C. W.

Cereal Crop for Hay.

Which of the grain crops—wheat, rye, oats, barley or emmer—would be the best to use for hay, considering quantity and quality?—R. H. B., Montezuma county, Colo.

Your choice as to which grain crop to use for hay can be governed almost entirely by the quantity of water available. Oats, no doubt, is the best crop from the standpoint of quantity, quality and palatability, having much heavier foliage than any of the others. Rye, under dry conditions, will no doubt give you desirable results. You will find the water requirements of barley stand between oats and rye, but it is not practicable as hay as compared with the other two.—C. H. Alford, Colorado Agricultural College.

Eradication of Soap Weeds.

What is the best method of eradicating soap weed?—W. A. C., Las Animas county, Colo.

In pasture lands there is only one way of eradicating the weeds, and that is to dig them out with a spade or some such implement. In plow land deep plowing will usually accomplish the result. An occasional plant which survives deep plowing can be dug out with a spade.—Alvin Kezer.

Insulating Potato Storage.

In building an outside storage house for potatoes, would sawdust be any better than dirt for filling space in front of door?—F. N. K., Gunnison county, Colo.

Sawdust is a better non-conductor of heat than dirt, and could be used for this purpose to good advantage.—G. C. W.

Wants Radio Receiving Outfit.

Where can I get instruction book and information about erecting wireless outfie.—F. N. K., Gunnison county, Colo.

Write to Reynolds Radio Company, Denver. Also write to Bureau of Standards, United States Department of Agriculture, for pamphlet specially prepared for use of boys' and girls' radio clubs.—G. C. W.

What Variety of Beans.

What kind of beans do best in Colorado and sell best. What share of the crop goes to the land owner when beans are put in on rented land? How is corn shared when renting and what is best variety to plant?—M. N. Pueblo county, Colo.

Pinto beans are the most commonly grown market variety for Colorado conditions. Minnesota 13 is a standard corn for most Colorado conditions. Conditions of renting vary so much that no set rule can be given. It is usual to give one-third of crop where the owner furnishes land only. Call on your county agent in Pueblo for definite information based on your local conditions.—G. C. W.

Board Controls School Bus Route.

Can the school board force me to go one-half mile off the main road to get scholars on a side road which is ungraded and rough? I furnish my own bus.—E. W. C., Saguache county, Colo.

The law gives the school board authority to make all arrangements in conection with the driving of a school bus, including the route to be followed and the time schedule. I would advise that the matter of leaving the main graded road to pick up school children be taken up with the school board to see if some adjustment cannot be made, either by having the road put in proper condition or by having the children meet the school bus at a certain point at a designated time.—Katherine Craig, Superintendent of Public Instruction.

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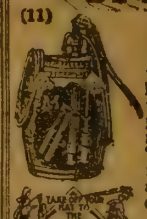

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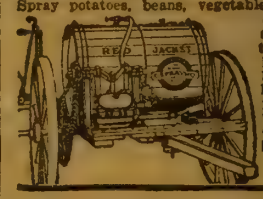

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VETERINARY ADVICE.

Questions in this department answered by Dr. George H. Glover, head of the Veterinary Department, Colorado Agricultural college.

Hogs Dying With Thumps.

I have some shoats farrowed September 6, running on free range and getting all the slop, milk and corn they will eat. One has died with thumps and another is thumping slightly and cannot stand still on his hind legs. Seems to be weak in his back and retains his urine. I gave him five drops carbolic acid and one teaspoonful turpentine in a little milk. He stopped thumping, but is getting worse in his hind legs. Two others were beginning to get nervous and stamp with their hind legs. Thinking I was feeding too heavily, I stopped giving slop and put the pigs into a pen, feeding them three small ears of corn each daily and water only. These got well, but the first one is not improving. The largest of these shoats will weigh 100 pounds. What is the best medicine to feed shoats for worms and size of dose?—J. W. M., Kiowa county, Colo.

Your brief description of the disease affecting your hogs makes the matter of diagnosis very uncertain.

Thumps appear mostly in little pigs, and results probably from some deficiency in the ration or improper feeding of the mother. For two weeks prior to farrowing, the mother should be fed on a light laxative diet and with plenty of opportunity for exercise. Thumping is occasionally seen in hogs suffering with cholera, or as a result of digestive disturbances.

The retention of urine in the sheath indicates necrobacillosis, which is usually associated with deep-seated ulcers in the mouth and croupous membranes in the throat.

Again, you speak of symptoms of paralysis in these hogs. Paralysis in hogs has been become quite a serious matter, for it is very prevalent in Colorado. It is looked upon as a deficiency disease, or in other words, due to feeding an unbalanced ration. In Wyoming they look upon carrots as almost a specifis in curing posterior paralysis of hogs. If the disease becomes serious, and appears to be of an infectious nature, you should call on the state veterinarian, Dr. Charles G. Lamb, State Capitol, Denver, for assistance.—G. H. G.

* * *

A worm medicine very commonly recommended is santonin, six grains, and calomel, four grains, to each hundredweight of hog. This is to be fed in a thin slop after the hogs have been off feed for 18 to 24 hours. Care should be taken that each hog gets his proper portion of the medicated feed in case several hogs are treated at the same time. If santonin cannot be obtained, quite satisfactory results will follow giving finely powdered copper sulphate or blue vitriol at the rate of a level teaspoonful to the hundredweight of hogs, administered in the same manner as the santonin and calomel. It is a good plan in treating hogs for worms to keep them in limited quarters for a few days in order that the live worms and eggs expelled by the treatment may be destroyed with some strong stock dip solution or freshly slacked lime. This prevents re-infestation.—G. C. W.

Cow With Chronic Diarrhea.

What can be done for a cow which has had a bad diarrhea for six months. She is only 4 years old.—A. W. R., Cheyenne county, Colo.

The treatment for diarrhea would of course depend very much upon the cause and the real facts in this case have not been made manifest. Diarrhea is a reaction to relieve the intestinal tract of an irritant. However, the irritant in some instances may be remote. Very likely it is intestinal catarrh of a chronic nature and can best be treated by regulating the diet.

A few cases of paratuberculosis —(Johne's disease)—have been reported in Colorado, and we are naturally suspicious of chronic cases of diarrhea. This is a chronic infectious disease of cattle, characterized by a thickening and corrugation of the intestinal mucous membrane, and is caused by a germ resembling the bacillus that causes tuberculosis.

Diarrhea is merely a symptom of many diseases, most too numerous to mention, and treatment would have a wide range of application. It would at least be well to give dry feed and provide an abundant supply of pure water. —G. H. G.

Treatment for White Scours.

Two calves which I intended to raise by hand have died within two days after birth from what appears to be a severe diarrhea. Both nursed their mothers over night. One drank well once and then seemed to lose its appetite. The other one refused to drink from the start. They seemed to be in pain and passed watery discharge from the bowels, and one passed some blood. I gave raw eggs and a little salt water and scalded milk. The calves seem all right until five hours after birth.—N. E. H., Kit Carson county, Colo.

The calves were apparently affected with white scours, which in very young calves is quite sure to be infectious. This disease appears to be intimately associated with contagious abortion. Calves may be born with it or contract it within a few hours after birth. This form of scours is almost invariably fatal. Where this disease is present on the farm, cows that are soon to calve should be taken to another part of the farm and kept there until the calves are at least a week old. Possibly a few calves might be saved by treating them as follows:

First—Do not allow the calf to nurse its mother for 24 hours after it is born.

Second—Empty the intestinal tract at birth by the use of castor oil and enemas.

Third—Use anti-scour serum. Treatment of the disease promises little, but in prevention much can be accomplished, and the most important thing is to determine the presence of contagious abortion in the herd. Diarrhea that appears in older calves is due to digestive disturbances because of bad management in feeding, and is an entirely different proposition from the disease in question. Probably the best thing that you can do under the circumstances is to see to it that no more calves are born on the infected premises. Under separate cover I am sending our bulletin for abortion disease.—G. H. G.

Pigs Have Sore Mouth Disease.

In a bunch of pigs four and a half months old one got poorer from day to day and seemed to save something the matter with his legs, moving about as though he were hobbled. We finally killed this pig and made examination, expecting to find it badly infested with worms, but found none. In his mouth we found just a stump or two. What was the trouble?—G. B., Cheyenne county, Colo.

The pig may have been affected with necrobacillosis, commonly spoken of as canker, bull-nose, or simply as the "sore mouth disease." This disease is quite common among pigs in Colorado, and in the aggregate causes a heavy loss. If I am right in guessing at this disease, your other pigs are probably more or less affected. When the infection is in the mouth, it causes deep-seated ulcers, croupous membranes, and the teeth may fall out. In the nasal passage it causes snuffling, twisting of the snout, and a nasal discharge. It may appear as a hard tumefaction on the udder of cows, or as a hard tumor about the head. The feet may become affected, making it difficult for the animal to walk. Contagious foot-rot of cattle, or other animals, lip and leg ulceration of sheep, and calf diphtheria, all come in this category. I am sending a bulletin which treats of this disease in detail.—G. H. G.

Treating Paralysis in Hogs.

A gilt due to farrow in about three weeks seems unable to get up and stand on her hind legs. When she is standing she keeps lifting her legs as if in pain. She gets up only at feeding time. I had been feeding ear corn, but changed to ground barley. What is the trouble and what can I do?—I. T., Prowers county, Colo.

The symptoms of paralysis in the gilt may be due to rheumatism, or it may be incident to pregnancy, and disappear after farrowing. Again posterior paralysis in hogs is quite common, due to neither of the above causes. In this instance it probably can be best classified as a deficiency disease. In other words, there is something needed for nutrition that is deficient in the food ration. Neither corn nor ground barley constitutes a balanced ration. Try a more varied ration, milk, roots, especially carrots, alfalfa, and feed relatively less concentrates until after she farrows. Considering that there is a chance that it may be rheumatism, it will be well to keep her off the plank or concrete floors. Provide some bedding, but not too much. The worst place in all the world to keep hogs is around a straw stack. They become overheated, and come out in the morning steaming hot. It is easy enough to predict the consequences.—G. H. G.

Cow Has Infected Udder.

We dilated the teats of a hard-milking cow when she freshened and her udder has swelled first in one quarter and then in another. Now the two back quarters swell up every week or so. When the udder is swollen she gives ropy milk from the affected quarter. She will freshen again in September. What can we do?—I. T., Prowers county, Colo.

Your cow has inflammation of the udder, caused by infection, incident to careless methods used in an attempt to dilate her teats. The physiological congestion of the udder while she is secreting milk make conditions unfavorable for controlling the inflammation. Probably it will be better to quit milking her until she again becomes fresh, when there is some chance at least that she will have become normal. Why not employ one of the veterinarians in Lamar to treat this cow?—G. H. G.

Castor Oil for Warts.

What is a good remedy for the warts which come on the necks and briskets of calves and yearlings?—G. B., Cheyenne county, Colo.

Warts that appear about the head and neck of calves are seldom malignant, and will disappear after a few weeks with appropriate treatment. Dress them at least once a day with some bland oil, preferably castor oil, and do nothing that will irritate the skin.—G. H. G.

A well-kept farm account book will show the farmer how much his low-producing cows are costing him.

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Due to their simplicity and dependability, Case Threshers work from morning to night, requiring few adjustments and little attention. Their light weight and rugged strength make it easy to move them from one location to another. Their efficient work keeps teams and pitchers steadily busy. There are seven sizes—20x28, 22x36, 26x46, 28x50, 32x54, 36x58 and 40x62, and there is a Case Tractor to operate each size.

The Case dealer will tell you all about Case Threshers, Kerosene Tractors, Silo Fillers, Baling Presses, Road Machines, Grand Detour Plows, and Disk Harrows. See him, or address a post card to

J. I. CASE THRESHING MACHINE COMPANY
(Established 1842)
DEPT. R35 RACINE WISCONSIN

GRAND DETOUR PLOWS 1837

NOTE: Our plows and harrows are NOT the Case plows and harrows made by the J. I. Case Plow Works Co.

HOME dinners require suitable desserts. Jell-O makes a home dinner complete,—it is just right.

Jell-O has a light and velvety quality that makes it an ideal finish for dinner. It satisfies. Jell-O is so pretty that it rouses the family's interest at once, and it is as good as it looks.

JELL-O

America's Most Famous Dessert

The American Offices of The Genesee Pure Food Company are at Le Roy, N. Y. The Canadian Offices are at Bridgeburg, Ont.

YOUR RENEWAL SUBSCRIPTION Means more to us than a mere matter of dollars and cents. It is practical encouragement—that kind of encouragement which spurs us to try and make Western Farm Life a bigger and better magazine. If you like Western Farm Life, send us your renewal promptly and try and get your friends and neighbors to subscribe at the same time.

WESTERN FARM LIFE, DENVER, COLO.

8-Inch

TensionShears

The Kind That Don't Get Dull

WILL CUT ANYTHING FROM WET TISSUE TO THE HEAVIEST CLOTH.

This high-grade shear is equipped with a spring tension attachment that keeps them always sharp, and also makes it possible to adjust them to cut any kind of material. Every housewife will appreciate this feature as she knows how annoying it is to try to cut out different kinds of materials with a dull pair of shears that cannot be adjusted. These shears are made of the best carbon steel, which insures strength, and an "always sharp" keen cutting edge.

Free a pair of these shears given absolutely FREE, postage paid, with a three-year subscription to Western Farm Life. Subscription may be new or renewal.

We have only a few of these Shears left, and orders will be filled as received.

USE THIS COUPON

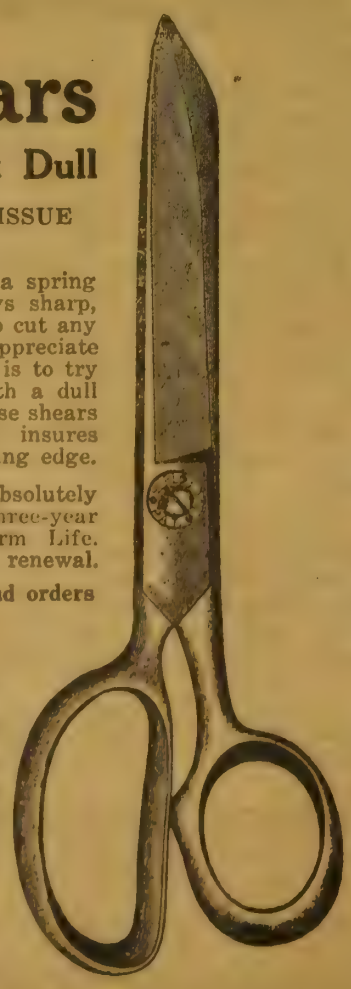
Western Farm Life, Denver, Colo.:

Gentlemen—Enclosed herewith find $1.50 for which please renew my / send me WESTERN FARM LIFE for three years, and send me, postage paid, the 8-inch Tension Shears.

Name .....

Post Office .....

R. F. D..... State.....



The Rural Household

Questions about home problems promptly answered by letter and through the magazine. Letters from women containing helpful suggestions for improvement of rural life are always welcome. Address all communications to Mary G. Collopy, Editor Home Department, Western Farm Life, Denver, Colo.

The Road That Leads Home.

My road is a by-road, with big trees reaching high,
A tapestry of living green against a sapphire sky;
An older road, a golden road, is the road I love to roam,
A gleaming road, a dreaming road, the road that leads to home.

My road is a shy road, where townsfolks never tread,
And breathe the scent of bramble-rose and fields of new-mown hay;
A road to woo with a song or two, ere the day has yet begun,
A smiling road, a beguiling road, that dips into the sun.

My road is a by-road, which townsfolks never tread,
With wild wind-flowers in the grass, and green leaves overhead;
Oh, down-mist road, oh, star-kissed road, across the white sea foam,
I hear you crying, hear you sighing, calling the wanderer home.

—Ethel E. Mann.

My Neighbor's Story.

Mrs. Timmons and Mrs. McCarty met at the parent teachers' meeting and began discussing every-day problems. Mrs. McCarty's six girls were in school, two drove to high school in town and four attended the country school two miles from home.

"Yes, it's a real task. Even though we get up early," said Mrs. McCarty, "there's so much to be done. There are prayers to be said, hands to be washed, hair to be combed, and dresses to be changed."

Mrs. Timmons told me afterwards how she admired that clear thinking mother, who, in the morning rush, still had time to see that prayers were said.

Home Demonstration Agent Appointed.

Mrs. Ramona Ryan, graduate of Colorado Agrficultural college, has been appointed home demonstration agent for El Paso county, Colo. Her headquarters are at Colorado Springs. Women in El Paso county have already written to the editor of this department expressing their satisfaction in the appointment of one who knows, from actual experience, the needs of the women in rural communities. Western Farm Life congratulates El Paso county women upon the appointment of their third home demonstration agent. We wish them well and we want to hear of their plans and their work together.

Treatment of Floors.

Stains are used on floors to bring out the grain of the wood, or to make them harmonize in color with other woodwork or with furnishings, or to give certain softwoods tones similar to hardwoods.

Oil and water stains, so called because of the solvent used, are the common kinds. Oil stains are easy to apply evenly and do not raise the grain of the wood, but they do not penetrate very deeply and are likely to give a muddy effect. Water stains, on the other hand, soak in readily, give a clear color, and are cheaper than oil stains, but raise the grain of the wood so that sandpapering a second time may be necessary. Water stains may be used on either hardwoods or softwoods, but as a rule oil stains are not so successful on hardwoods.

Both water and oil stains may be bought ready mixed, or some of the simple ones may be made at home. In any case, before using, the stain should be tested on an inconspicuous part of the floor or on a sample of the same kind of wood. If the color is too intense, the stain should be diluted with the kind of solvent with which it is mixed or other suitable liquid. For example, an oil stain may be diluted with turpentine and water stain with water.

The following formulas have been tested by the Bureau of Chemistry of the United States Department of Agriculture:

Homemade Floor Stain No. 1—1 ounce permanganate of potash, 1 quart warm water. The solution made by dissolving the permanganate of potash in the water is violet colored, but when it is applied to wood a chemical action results and the wood is stained brown. This stain gives better results on pine than on oak flooring.

Homemade Floor Stain No. 2—1¼ ounces pulverized gilsonite, 1 quart turpentine. This is a brown stain that can be used on either softwoods or hardwoods.

Homemade Floor Stain No. 3—½ pound raw sienna (ground in oil), 2 ounces raw umber (ground in oil), 1 pint boiled linseed oil, ½ pint ground japan drier, 1 pint turpentine. Putting these materials into a bottle and shaking vigorously is perhaps the best way of mixing this stain. It has been found to give excellent results on oak.

If an oak floor is to be water-stained, coating at first with clear water and sandpapering it smooth after it is dry will lessen the tendency of the stain to raise the grain of the wood. Oil stains will be absorbed more evenly by pine or maple floors if the wood is first coated with a mixture of 3 parts turpentine and 1 part linseed oil and the surface sandpapered smooth after it is dry.

Stains should be applied rather thinly with a clean brush or a sponge with even strokes taken parallel with the grain of the wood. With water stains especially, care should be taken not to let the strokes overlap, and the stained surface should be wiped at once with a soft cloth or cotton waste. Oil stains should be allowed to set for a few minutes before the surface is wiped. Two coats of light stain generally give a better effect than one coat of heavy stain. In general, 1 gallon of oil stain will coat about 400 square feet of floor once, depending, of course, on the depth of color desired and the texture of the wood.

After a floor is stained, it should be allowed to dry for at least 24 hours, and dust kept from it as much as possible. When thoroughly dry, it should be polished with a weighted brush covered with carpet, after which it is ready for the filler and wax or varnish.

Some of the very porous woods may be filled and stained at the same time by combining the stain and the filler, but generally a better effect is obtained by applying them separately.

Note—Watch the next issue for recipes for crack filler and floor varnish.

Need Iron in Diet.

Growing children need a diet rich in iron. This is also to be emphasized for those who are anemic and need a tonic. The following foods are rich in iron:

Breads—Entire wheat, graham, Boston Brown.

Cereals—Rolled oats, rolled wheat, shredded wheat.

Vegetables—Spinach, lettuce, Swiss chard, asparagus, dandelion greens, rhubarb, cabbage, Brussels sprouts, string beans, dried beans, tomatoes, beets, peas, etc.

Fruits—Raisins, pineapple, blackberries, prunes, figs, dates.

Protein rich foods—Eggs, lean beef, fowl, fish, lamb, milk.

Sugars—Molasses, maple syrup.

Study Nutrition Problems.

"Women do not study rural home problems as do the men their farm problems," says Miss Miriam M. Haynes, state leader of Home Demonstration agents at Colorado Agricultural college. "The farmers know all about animal nutrition and they do not shy at such terms as proteins and carbohydrates when they figure a ration for their pigs or their dairy cows. Why isn't the child worthy of the same study? I am trying to impress upon the rural women the importance of a study of foods for their children, because health of the family is fundamental. Without a strong, healthy body the boys and girls cannot become successful farmers and home makers. It is up to mother to start them right."

Breaking Up a Cold.

Diet plays an important part in "breaking up" a cold. For the first few days a light laxative diet of low fuel value, such as hot lemonade, broths, gruels with crisp toast, baked mild stewed fruits and vegetables should be the chief articles of diet. Follow this with a normal diet, and gradually add foods of higher fuel value.

In moments of supreme test, remember that what others dare, you can dare. —Sheldon.

Our Fashion Service.

All patterns 12 cents each. Address Western Farm Life, Pattern Department, 1518 Court Place, Denver, Colo.

Read This Before Ordering: Patterns ordered through this magazine are mailed promptly from the factory at Brooklyn, N. Y., and arrive in 10 to 12 days from time order reaches Western Farm Life. Be sure to specify size and number of patterns. Write your name and postoffice address plainly to avoid delay. These patterns are handled at cost, as a service to our women readers. The price of 12 cents includes postage.

3910—A Charming New Gown With Youthful Lines. This style will readily appeal to the woman of slender lines. It is simple in construction and altogether comfortable. This is a good style for plain and figured foulard, for the new Paisley material combined with satin or pongee, also gingham and linen. The Bolero is worn over a camisole slip. It features the new full skirt. The pattern is cut in six sizes: 34, 3, 38, 40, 42 and 44 inches bust measure. The 38-inch size requires 3¼ yards for the slip of 44-inch material, and 2¼ yards of 40-inch material for the Bolero. The width at the foot is 2½ yards.

3705—A Popular House Dress. Cut in seven sizes: 36, 38, 40, 42, 44, 46 and 48 inches bust measure. A 38-inch size will require 6¾ yards of 27-inch material. This model has good lines and practical style features. The sleeve may be finished in wrist or elbow length. The width at the foot is 2¼ yards. Gingham, percale, flannelette, challie, lawn, dimity, calico and chambrey are good for this design.

3919—An Ever Youthful Design. Charmingly simple with just the right lines for youthful figures. This dress is pretty in taffeta or crepe with trimming of ribbon arranged in lattice effect, and tiny roses for a finish. Embroidery or braid too, is effective. The sleeve may be finished without the puffs. This pattern is cut in three sizes: 12, 14 and 16 years. A 14-year size requires 3¾ yards of 40-inch material. The width of the skirt at the foot is about 2 yards.

3926—One of Fashion's Favorites. The smart but simple lines of this coat dress will appeal at once to the woman or miss of conservative taste, who likes good style. This is a mode good for all seasons. It develops equally well in taffeta, velvet or linen. The pattern is cut in 3 sizes: 16, 18 and 20 years. The width at the foot is about 2¼ yards. As here portrayed, kasha cloth was used with bands of wool embroidery for trimming. To make the dress for an 18-year size requires 4 yards of 44-inch material.

3918—A Dainty Party Frock. Very girlish and pleasing is this charming frock. It will lend itself nicely to a development in crepe de chine with a finish of picot, or to taffeta, net, batiste or organdy. If desired the skirt may be made with a single tier and the sleeve finished without the ruffles. The pattern is cut in four sizes: 8, 10, 12 and 14 years. A 10-year size requires 4⅜ yards of 36-inch material.

3448—A Pleasing Apron Model. It is cut in four sizes: Small, 32—34; medium, 36—38; large, 40—42; extra large, 44—46 inches bust measure. To make the design for a medium size will require 4½ yards of 36-inch material. Gingham, seersucker, chambrey, lawn, alpaca, drill and sateen are attractive for this style.

3920—A Dainty Frock for Mother's Girl. A charming copy of the "over blouse" dress is here portrayed, just as neat and pretty as can be for the little girl, and such a comfort for mother because easy to make and launder. Voile or pongee could be used with embroidery, or gingham with wash braid or cross stitching. The pattern is cut in four sizes: 2, 4, 6 and 8 years. A 6-year size requires 2¼ yards of 36-inch material for the dress, and 1⅜ yard for the Guimpe.

3921—A Popular Model. Every "small" person likes comfort, and never more than at playtime. In this neat and simple play suit "fashion" has contrived to develop a practical garment. The smock and knickers are cut in one, so the garment stays "together," and is easy to adjust. The pattern is cut in four sizes: 1, 2, 3 and 4 years. A 2-year size will require 2⅝ yards of 36-inch material. Pongee, crash, linen, gingham, chintz and cretonne are nice for this style.

From the Nation's Capital.

(Continued from Page 9.)

farm papers. The Federal Department of Agriculture has recommended that it be abandoned, and the subcommittee had evidence that the Congressional seed packages were being used improperly as premiums by private individuals. Nevertheless members of Congress and Senators say that they receive numerous requests from their constituents asking for the seeds, and that the farm papers are wrong in their contention that farmers do not want the free seeds or do not plant them.

::::

Cold-Storage Bill Reintroduced.—The cold-storage bill, which failed in conference last year, has been reintroduced by Senator Norris of Nebraska. This bill was opposed by many shippers of perishable agricultural products in the West when it was before the committee for hearings during the last Congress. The greatest objection was in regard to the clause which provided that dates of storage be stamped on eggs and other products after they had been in refrigerator cars or cold storage a certain number of days.

::::

Farm Radio Movement Backed by Bureau of Markets.—W. A. Wheeler of the Bureau of Markets, to whom in large measure is due the credit for starting the farm radio movement, says that when the radiophone becomes as much a part of the farm equipment as the telephone, the farmers will be able to control the shipments and marketing of their products to the best advantage. They will know the market prices in the leading markets, the receipts and shipments en route, supply and demand of each market, and possess other information which will enable them to sell and ship their products intelligently. This service will be especially helpful to the growers and shippers of perishable fruits and vegetables.

Reports of the number of cars loaded, cars en route and destination of perishable fruits and vegetables are received by the Bureau of Markets every twenty-four hours from 474 railroads. These reports are received at the close of each day, and reports based on the information they contain are sent out every morning to the producing sections. Arrangements are being made whereby in time the Federal Bureau of Markets will control and supervise all the market and weather reports sent out by radio.

Mr. Wheeler says the radiophone has brought the city with its lectures, its church services, entertainments and concerts direct to the farm home.

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Farm Buildings on Reclamation Projects.—According to an announcement by Secretary Fall, farm homes and buildings erected on projects of the reclamation service of the Department of the Interior represent an investment of $40,000,000. A total of $80,000,000 worth of buildings have been erected in towns developed on desert land.

Tar spots on the fenders or varnished parts of the body of the car may be removed by spreading salt or butter over the spots, allowing it to stand for a half hour, and then carefully lifting off the whole mass. Another method is washing with soapsuds in which has been placed a small quantity of kerosene.

Grade animals descended from four generations of purebred sires are practically as good for market purposes as purebreds.

Would You Like to Own This Knife?

Send us a year's subscription to The Rocky Mountain News or The Denver Times. Or get your neighbor to give you his subscription for 6 months, together with your own for 6 months. In exchange we'll give you this fine case-hardened steel, Remington-made Knife. You can't buy it for less than $2.50 anywhere. Shown in actual size.

Subscription Rates by Mail.

NEWS—Daily and Sunday—
6 months, $4.00; 1 year, $8.00
NEWS—Daily without Sunday—
6 months, $3.00; 1 year, $6.00
TIMES—Daily with Sunday—
6 months, $3.50; 1 year, $7.00
TIMES—Daily without Sunday
6 months, $2.40; 1 year, $4.75

USE THIS COUPON AND SPECIFY PAPER DESIRED.

W. F. L., 4-15-22.

.....1922.

THE NEWS AND TIMES,
Denver, Colorado:

Enclosed find $..... for which you may send The Rocky Mountain News (with) (without) Sunday, for.....(6 months) (1 year)

The Denver Times (with) (without) Sunday for....(6 months) (1 year)

NAME .....

RURAL ROUTE .....Box No.....

TOWN.....STATE.....

NAME .....

RURAL ROUTE .....Box No.....

TOWN.....STATE.....

IN THE NEXT ISSUE

Experiences in "Irrigating Up" the Potato Crop.

IN many of the irrigated potato sections of the west, growers will experience difficulty in getting an even stand of potatoes this spring on account of the lack of moisture. For this reason we have secured from W. C. Edmundson, Superintendent of the Colorado Experiment Station, an article on "Irrigating Up" the potato crop. This article does not describe the growing of potatoes under irrigation in normal seasons, but it treats of the methods that can be employed by the grower in his endeavor to cope with adverse conditions as they occur during a dry season. Watch for this article in the May 1 issue.

Special Features in Current Number

- Colorado Farmers Feeding Steers Under Contract.
- Do Not Rush Headlong Into Head Lettuce Production.
- Mountain-Raised Vegetables of Superior Quality.
- Soil Blowing and Some Ways of Circumventing It.
- U. S. Grain Growers, Inc., Planning to Sell Grain.
- Learn to Control Drifting of Soil.
- Breeders Build Sales Pavilion.
- Market Outlook for Farm and Ranch Products.
- From the Nation's Capital.
- State Farm Bureau Program.
- Farmers' Service Bureau.
- The Rural Household.
- Profitable Farm Poultry.
- Dairying and Hog Raising.

Besides the above special features, note what a wealth of good articles and stories about farming and stock raising there are in this issue. Take this issue and compare it with any other farm paper, and you will readily realize how good a magazine Western Farm Life really is. Compare it page by page and article by article and you will see that it is by far the better magazine for farmers and stockmen in the Mountain states. It deals with our peculiar western conditions as we have them to contend with.

Do not forget to tell your neighbor about Western Farm Life. Let him have some of your old copies that you are through reading. In the last two weeks we have received scores of subscriptions from not only Colorado, but five other Western states, as the result of the good word that our subscribers are saying about Western Farm Life. When you hand your copy to a friend tell him what a good magazine Western Farm Life is and that the cost is now only $1.00 for three years.

ANCONAS for Profit

The fellow who wears the BROADEST SMILE and the BIGGEST BANK ROLL now-adays is the ANCONA MAN. Never before has there been so many folks taking up POULTRY as a BUSINESS PROPOSITION, and the CENTER of INTEREST is the S. C. ANCONA—the greatest business hen ever known.

Don't take our word for it, we invite you to do as many others are doing, TRY THEM OUT with any other breed on earth. No matter what fowl you are now breeding, TRY S. C. ANCONAS BESIDES THEM and be convinced just as we were a few years ago that S. C. ANCONA is the BIGGEST LITTLE MONEY MAKER of the age.

THE PUBLIC WANTS THEM—Are you in a position to supply the demand in your territory? If not, write us. We will mail you our free catalogue, giving you valuable information concerning the breed, our methods, and our strain of trap-nested and pedigreed Anconas—the

Leading Exhibition Strain of the West

JUST WON AT THE NATIONAL WESTERN—First cock, first hen, first, second and third cockerels, and first and second pullets. No pens entered.

Our strain is bred for EGGS by the only reliable method—the TRAP NEST.

BABY CHICKS AND HATCHING EGGS in any quantity, at PRE-WAR PRICES. We can sell you QUALITY chicks, as low as most hatcheries sell chicks from bought-up market eggs of unknown quality. Book orders at once, and avoid being disappointed.

Great Western Poultry Farm

Box F. Rocky Ford, Colo.

S. C. W. LEGHORNS

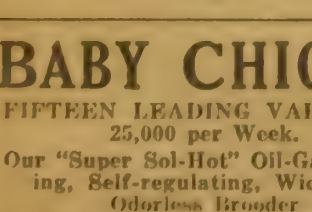
A WINTER-LAYING STRAIN.
247 to 288 Egg Blood

REDUCED PRICES FOR MAY AND JUNE SHIPMENTS.

Commencing May 1st—Hatching Eggs, $8.00 per 100; $75.00 per 1,000.

Commencing May 15—Day-old Chicks, $16.00 per 100; $155.00 per 1,000. Prepaid to Your Door. Safe Arrival Guaranteed. Orders filled in rotation as received. A big hatch off every week.

You can order direct from this ad with perfect safety that you will get a SQUARE DEAL. Order now—save time. Every egg and chick we ship comes from our own carefully selected bred-to-lay stock produced right here on THE FOWLER EGG FARM. No bought up junk, eggs or chicks, handled by us in any way. You will pay a cent or two more per egg or chick for our stock than for the common hatchery chicks, but you get from us a REAL WINTER LAYING STRAIN of Leghorns; a strain that will make you money right from the start.



Mr. Hayball, a customer in Idaho, writes: "172 pullets raised from your eggs have averaged me $4.75 PER DAY for November and December—60 PER CENT DAILY EGG YIELD."

Don't think such a record possible with any other strain of Leghorns. To do this you must have the FOWLER EGG FARM BRED-TO-LAY LEGHORNS. Send us your order today without delay. You will never regret it.

Illustrated Catalog mailed free to those who really mean business. Let us know your wants. Address

FOWLER EGG FARM, Route 1-B, Fowler, Colo.

Blakeland Farms' Quality Leghorns

SPECIAL SALE—To make room for Baby Chicks: For $25 we will ship 12 fine exhibition S. C. White Leghorn Hoganized Pullets mated with fine male. Order before they are gone.

24 BLAKELAND BUSINESS LEGHORNS LAID 4,804 EGGS IN 365 DAYS.

These eggs sold for $191.92, or $8.33 average per bird. Our best record pullet last year laid 292 eggs. The foundation for such a business can not be bought for a song. Our prices are reasonable. BLAKELAND STANDS FOR QUALITY FIRST, LAST AND ALWAYS. Write for Catalog B.

Blakeland Farms, ON COLORADO SPRINGS ROAD **Littleton, Colo.**

LOWER'S POULTRY FARM

ARVADA, COLORADO.

Has developed a strain of all-year laying Single Comb Rhode Island Reds that will lift your mortgage and put you in the way of making money with poultry. Descriptive Booklet on Request.

STOCK, EGGS FOR HATCHING, BABY CHICKS.

BABY CHICKS AND HATCHING EGGS

From Merk's Famous Strain of S. C. White Leghorns, that have the laying habit bred into them through years of patient selecting and careful mating, and have the vitality to maintain it. Send for circular and price list. We guarantee to please you and our prices will surprise you.

Merk's Poultry Farm, Rocky Ford, Colo. Box W

Reduced Prices on Hatching Eggs and Baby Chicks

FROM SUNRISE S. C. WHITE LEGHORNS, THE KIND THAT LAYS THE WINTER EGGS.

As we have received circulars with original price list, please note the 25% reduction: CHICKS 25, $4.25; 50, $8; 100, $15; 500, $67.50; 100% live delivery guaranteed. HATCHING EGGS, 15, $1.15; 50, $3.75; 100, $6.75; 500, $30; 90% fertility guaranteed. Write and get our circular for further information regarding our stock, etc. Please book orders early. F. W. Stanbridge & Son.

SUNRISE POULTRY FARM, ROCKY FORD, COLO. R. R. 3.

BABY CHICKS

FIFTEEN LEADING VARIETIES
25,000 per Week.

Our "Super Sol-Hot" Oil-Gas Burning, Self-regulating, Wickless, Odorless Brooder is the sensation of the poultry-raising public today. It cannot go out. Write or wire for particulars.

UTAH STATE HATCHERY,
3687 South State Street,
Salt Lake City, Utah.

Larson's S. C. W. Leghorns

LAY—PAY—WIN. Hatching Eggs, Baby Chicks and Stock for sale at let live prices from a strain that is bred for beauty and profit.

Cherrydale Poultry Farm,
L. E. Larson, Owner.
R. R. No. 1. FORT MORGAN, COLO.

S. C. White Leghorns

113 hens winter laying hens lay 18,173 winter eggs in three months. Day-old chicks, $20.00 per 100. Hatching eggs, $11 per 100.

THE ORDWARY POULTRY FARM
Jacob Schleining. Ordway, Colo.

Profitable Farm Poultry

W. E. VAPLON.

Questions about the farm flock promptly answered by letter. Free advice on all phases of poultry production. Address all inquiries to Poultry Department, Western Farm Life, Denver, Colorado.

Allowing fowls to drink impure water is simply inviting disease. It costs but little to have earthen or iron drinking vessels and in these the water can be kept clean and pure. Plenty of pure water should be kept before the flock at all times. Nothing will so quickly cut down the egg yield in a laying flock than a shortage of water.

The cleanings from the poultry house are valuable as a garden fertilizer and may be kept in barrels or some other receptacle where they may be kept reasonably dry until spread on the garden. This fertilizer is very rich and is liable to burn the plants if applied in too large quantities or in direct contact with the roots.

Raising Turkeys Successfully.

Since learning how, I have had no trouble in raising turkeys, in fact, find it as easy as to raise chickens, or easier. Many find it difficult to handle turkeys successfully for the first few weeks. I have read everything I could find on poultry, but have never seen a description of my method of raising turkeys.

For the first ten days I give them nothing but water, gravel and a feed composed of equal parts of dandelions and onions, ground fine and mixed with corn meal. I grind enough for one day and keep it in a cool place and at each feed I add enough cornmeal to make a stiff mash. If the herbs seem dry add a very little water. When the poults are ten days old I add clabbered milk to their ration and just cut the herbs fine instead of grinding them. As they are not so moist this necessitates a little more water. About this time I also give them a little fine grain, but feed the chopped feed at least once a day for a month. I also use the same for little chicks and have never lost one with bowel trouble.

I kept the mother confined in a coop at the edge of the alfalfa field and allow the little ones to roam at will, and although we irrigate and they are often soaked it does not seem to affect them. This method has been used on a Wyoming ranch for nearly twenty years with perfect success, there being less loss among the little turkeys than among chicks, that is until the coyotes considered it was time to begin being thankful and celebrating with a turkey dinner.—Alberta Hilands, Wyoming.

Money in Eggs.

We have averaged $1 a day net from our sixty hens for the six months since September. The eggs are gathered two or three times daily and graded in size and color. By doing this we can sell them to special customers for 10 to 15 cents more than market prices. We plan to double our laying flock this year.

I find that a light, warm coop, variety in feed, and plenty of it, are the most essential things to make hens lay. For winter feed we use wheat, corn, oats, alfalfa leaves, bran with milk, stock beets, and oyster shell. In the summer they range on alfalfa and are fed wheat, corn, oats and dry bran. We cull out the under-sized, off-colored and old hens more than two years old and sell to produce buyer.

We hatch all our chickens before April 15, in order to have a nice bunch of pullets that will lay all winter. We set four or five hens at the same time we start the incubator. When hatched the chicks are divided among the hens and placed in individual coops.—Mrs. J. E. Perkins, Jefferson county, Colo.

Ridding Hens of Lice.

How can I rid my flock of hens of lice? —E. L. C., Denver county, Colo.

One of the best remedies is sodium floride. A pound would treat a hundred hens applied by the pinch method, which involves holding the hens and working the powder into the feathers in various parts of the body.

Many poultry breeders are using the dipping method for treating hens for lice. It is more economical of the material and does not take so long. Of course, fowls cannot be dipped unless the weather is warm. When dipping, use tepid water and a tub, filling the tub to within six to eight inches of the top. An ounce of the commercial sodium floride is enough to dissolve in this water. In dipping fowls it is best to hold the wings over the back with the left hand, leaving the head out and ruffling the feathers under the solution so that it will reach the skin. Then duck the head under once or twice and hold the hen a few seconds to drain. Of course, in dipping a bright sunny day should be taken and the dipping done early in the morning.

What is known as mercurial ointment or blue ointment is sometimes used to reduce body lice. It is applied around the vent. This treatment has little effect on wing lice or head lice. Of course, the natural method for hens and chickens to rid themselves of lice is to wallow in dry dust. This helps to keep the lice in check but does not keep the fowls entirely free from them.—G. C. W.

Symptoms Suggest Tuberculosis.

Can you tell me what ails my chickens? I have lost several hens and nothing I do for them seems to help. They droop around as though they had cholera only the slimy discharge is not present. They lose their appetite, get very light in weight and finally die. The flock in general seems to be healthy and lay well. They get sick one at a time. All that I have lost are pullets. Any information you can give will be appreciated.—Mrs. J. D., Morgan county, Colo.

From the description given of the disease in your flock, it looks as though tuberculosis in some form is present. This is only a guess, however, and would suggest an examination of a dead fowl by a veterinarian. If it is a contagious disease every affected fowl should be isolated, and bad cases destroyed. If you have no veterinarian, send a live fowl having the disease to the veterinary department of the Colorado Agricultural College, Fort Collins, or send the viscera—internal organs—of one which has just died, placing powdered borax around it and shipping in a tight box.—W. E. V.

Breed for High Altitude.

What breed of chickens would be best for this locality? Mt. Morris is about 7,000 feet. The snow gets pretty deep and it goes to 40 degrees below zero a day or two at a time about two or three times each winter. Other times the days are nice and generally warm. No one in this vicinity is specializing on purebreds, so I cannot get any information out here. How much grain a day should be given?—D. W. C., Routt county, Colo.

Any of the American breeds of poultry will suit your conditions, Plymouth Rocks, Wyandottes, or Rhode Island Reds. They are of medium size, mature quickly, and if hatched in March or early April will lay well all winter. It is generally held that a dozen grown fowls require about a quart of grain at a feeding. If the hens are not hungry for their meal, cut down the amount. By all means give the hens a chance to work for their grain, by scattering in litter.—W. E. V.

Preserving Eggs in Water Glass.

When eggs are plentiful and low in price it is a good plan to preserve some of the surplus for home use. The most satisfactory method is to use water glass. This material can be purchased at drug stores, or feed and poultry supply stores.

Wooden kegs, candy pails, or stone jars, are usually used for holding the eggs. Prepare the vessels by cleaning thoroughly; boil fourteen quarts of water and while the water is still warm, add one quart of water glass and mix well. Some recipes call for one part of water glass to nine parts of water, but the above recipe of one to fourteen has been found very satisfactory and much cheaper. If the vessel is about half filled with this solution, the eggs may be put in from day to day as they are gathered, and this amount of solution will usually cover the eggs when the vessel is full. There should be sufficient solution to cover the eggs so that none are exposed to the air. Covering the vessel with oiled or greased paper will prevent evaporation. The eggs should be kept in the same way as are canned fruits or vegetables.

Eggs may be placed in the vessel in any position. Boiled water is quite sure to be pure. Only clean, fresh eggs should be used.

Mineralized Water Routes Chicken Lice

Tablets Dropped Into Drinking Founts Banish Vermin, Make Fowls Grow Faster and Increase Egg Yield.

Any poultry raiser can easily rid his flock of lice and mites, make chickens grow faster and increase their egg yield by simply adding minerals to the fowls' drinking water. This does away with all bother, such as dusting, greasing, dipping and spraying. The necessary minerals can now be obtained in convenient tablets, known as Paratabs. Soon after the fowls drink the

mineralized water, all lice and mites leave them. The tablets also act as a tonic conditioner. The health of the fowls quickly improves, they grow faster and the egg yield frequently is doubled. Little chicks that drink freely of the water never will be bothered by mites or lice.

The method is especially recommended for raisers of purebred stock, as there is no risk of soiling the plumage. The tablets are warranted to impart no flavor or odor to the eggs and meat. This remarkable conditioner, egg tonic and lice remedy costs only a trifle and is sold under an absolute guarantee. The tablets are scientifically prepared, perfectly safe, and dissolve readily in water.

Any reader of this paper may try them without risk. The laboratories producing Paratabs are so confident of good results that to introduce them to every poultry raiser they offer two big $1 packages for only $1. Send no money, just your name and address—a card will do—to the Paratab Laboratories, Dept. 895, 1100 Coca Cola Building, Kansas City, Mo., and the two $1 packages, enough for 100 gallons of water, will be mailed. Pay the postman $1 and postage on delivery, and if you are not delighted with results in 10 days—if your chickens are not healthier, laying more eggs and entirely free from lice and mites—your money will be promptly refunded. Don't hesitate to accept this trial offer as you are fully protected by this guarantee.

The Cause of White Diarrhea

White Diarrhea is caused by the bacillus Bacterium Pullorum transmitted through the yolk. There is scarcely a hatch without some infected chicks. The germs multiply very rapidly and one infected chick may infect the entire brood. The germs can be killed by the use of preventives. Intestinal Antiseptics to kill the germs should be given as soon as the chicks are out of the shell. It is much easier to prevent than it is to cure.

How to Prevent White Diarrhea

Dear Sir: I have raised poultry for years and have lost my share of little chicks from White Diarrhea. Finally I learned of Walker's Walko Remedy for this disease, so sent for two 50c packages to the Walker Remedy Co., Dept. 356, Waterlpo, Iowa. I raised over 500 chicks and never lost a single one from White Diarrhea. Walko not only prevents White Diarrhea, but it gives the chicks strength and vigor—they develop quicker and feather earlier. I have found this company thoroughly reliable and always get the remedy by return mail. —Mrs. L. L. Tam, Burnetts Creek, Ind.

Don't Wait

Don't wait until White Dirrhea gets half or two-thirds your chicks. Don't let it get started. Be prepared. Write today. Let us prove to you that Walko will prevent White Diarrhea. Send 50c for box on our guarantee—money back if not satisfied. Walker Remedy Co., Dept. 356, Waterloo, Ia.—Adv.

Baby Chicks

NEW LOW PRICES — SEASON 1922

MILLER BABY CHICKS ARE BRED FOR HEAVY EGG PRODUCTION

Customers report pullets lay all winter. 20 varieties to select from. 1,000,000 chicks via prepaid parcel post safe delivery guaranteed. Pleased customers in every state. 19th season. Catalog FREE.

MILLER POULTRY FARMS
Box 605 LANCASTER, MO.

Free—Conkey's Poultry Book

240 pages chock full of information about the feeding and rearing of chicks, culling of hens, etc. Tells how to keep chickens healthy and how to make them pay. Whether a beginner or a professional, Conkey's Book is worth dollars to you. Sent for 6 cents in stamps to pay postage.

THE G. E. CONKEY CO. 6512 Broadway, Cleveland, Ohio

Plans for the farmer's production must be based on facts. He can get the facts about his own farm business from his account book, if it is carefully kept.

Good Money in Turkeys.

Two years ago we started out with eight purebred Mammoth Bronze turkey hens and one tom. The first year we managed to raise enough to keep eighteen hens. We then sent off for two purebred Mammoth Bronze toms. We wanted to raise a hundred turkeys.

When the hens started laying we gathered the eggs every evening so that they wouldn't chill. We made coops of old boxes and so forth, placing them where the hens were laying. We were sure to have the nests on the ground so that the eggs would keep moist and hatch better.

When the hens started to set we put slatted pens in front of the coops they set in so they could come out and eat and drink without being off or away from their nests too long, and also to keep other turkey hens from laying in the nest. After the turkeys were hatched we placed them in large coops out in the alfalfa field. We fed the young turkeys finely chopped hard boiled eggs and clabbered milk. When they were three weeks old we turned them loose as the grasshoppers and buggs were plentiful. We did not feed them very much for the next two weeks and after that they lived on what they got from the fields until in the fall, when we began to fatten them.

The first laying, we set 327 eggs and hatched 226 poults. It was a very wet spring and we lost quite a few in the rains. Later, when they were in the fields, the coyotes got their share. But after all, in the fall when we sold them we had around 165, which brought us close to $600. We are keeping fifty hens out of the 165 for this year.

Now, don't get the impression that these turkeys raised themselves, because from the time the hens started laying until the turkeys were sold in the fall they were constantly watched and looked after. The hens had to be watched so that they wouldn't hide their nests, and there was danger of wet grass in the morning, as turkeys always go out early to feed. We always had to be at home because of sudden showers and hail storms, and the coyotes were always ready to get a few, so we had to herd them in every night, as they would go one or two miles away during the day.—Mrs. J. E. Hall, Otero county, Colo.

More Honorable Mention Letters.

In our poultry letter contest we received many letters deserving of honorable mention. We hope to print most of these letters in Western Farm Life. To the names already given we would add the following: Mrs. J. E. Perkins, Arvada, Colo.; Mrs. John Hansen, Stoneham, Colo.; J. A. Martin, Park City, Mont.; C. H. Stickle, Fruita, Colo.; M. E. Moser, Bixby, Ariz.; W. Champney, Denver, Colo.; C. W. Harkness, Steamboat Springs, Colo.; Mrs. Anna Caughman, Hillside, Colo.; Mrs. G. W. Adams, Hot Springs, Idaho; Mrs. L. G. Dale, Loveland, Colo.; Mrs. C. A. Brown, Greeley, Colo.; Mrs. W. T. Hall, Cripple Creek, Colo.; George Leaffler, Stratton, Colo.; Mrs. J. J. Williams, Eads, Colo.; R. D. Mutz, Fowler, Colo.; Mrs. F. K. Stirn, Harrison, Mont.; Mrs. Eva Schmidgall, Eden, Idaho; Mrs. Jas. E. Hall, LaJunta, Colo.; W. D. Wilson, Manassa, Colo.

Where Hogs Get Tuberculosis.

By marking hogs and keeping records of their source until they have been slaughtered in the packing plants it is possible to find the farms on which tuberculous hogs originated. The use of this system has helped to find many herds of diseased cattle, for the hogs usually get tuberculosis from cattle. However, it sometimes happens that no tuberculosis is found among the cattle on farms from which tuberculous hogs have been shipped. In these cases, the United States Department of Agriculture has found evidence indicating that the hogs probably became infected from poultry. It is believed that a large percentage of the cases where hogs are infected and the cattle are clean, avian of fowl tuberculosis will be found on the place.

If a man "lays for you" he should be arrested; if a hen does not lay for you she should be executed.

Cleanliness and thrift are more essential to success in the poultry business than lots of space.

Overcrowding ruins many flocks of chicks. A brooder that will accommodate 300 day-old chicks will care for only one-half that number when they are two weeks old. Better raise a few good chicks than a lot of culls.

BABY CHICKS
At New Reduced Prices

LARGEST HATCHERY AND POULTRY FARM IN WESTERN COLORADO.
INCUBATOR CAPACITY 15,000 EGGS.

WE ARE REDUCING OUR PRICES FOR LATE CHICKS EARLIER than usual. 1,200 laying hens, thoroughbred S. C. W. Leghorns. Ferris strain from trapnested hens, with records of 265 to 300 eggs per year. Chicks that will produce eggs at 5 months. New prices are 15c each after April 10th, for the balance of the season. Guaranteed full count of live chicks delivered at your station. Place your order from this ad.

FAIRLAWN POULTRY FARM
FRUITA, COLORADO

TOWNSEND FARM
Formerly Mountain View Poultry Farm
HATCHING EGGS

From our superior flock of S. C. R. I. Reds, White Plymouth Rocks and S. C. Buff Orpingtons. Order early to assure yourself of prompt delivery. Prices furnished upon application.
STOCK FOR SALE.

PHONE LAKEWOOD 75. EDGEWATER, COLO.
Directly west and adjoining Lakewood Country Club.

Treatment for Hard Land.

Corrective applications of salts of calcium, iron and aluminum, have been found to be a successful means of overcoming the hard land condition in irrigated sections caused by alkali. This is an important result of the investigational work in irrigation agriculture carried on by the United States Department of Agriculture during the past year to discover the cause of the hardening of irrigated lands. Satisfactory measures for remedying this trouble have been worked out in many sections of the irrigated west, where the problem has been very serious.

In some cases desert soils suitably located for irrigation have been found to be so impermeable to water as to be useless for crop production. In other cases, lands that have been irrigated for a few years have become increasingly hard and difficult to get into good tilth, and in consequence have become unproductive.

This hardening of the soil is primarily due to the action of salts of sodium carried in the irrigation water. The difficulties occur in cases where the proportion of soda salts in the irrigation water is relatively high as compared with the salts of calcium.

Of the corrective salts applied the best known and most generally available is calcium sulphate, commonly known as gypsum or land plaster. Where the difficulties of hardening and impermeability are not very serious, application of land plaster may prove decidedly beneficial. But where the land is very hard and impermeable, it may be necessary to use aluminum sulphate. The effect of land plaster is limited by its low solubility, since it requires 600 parts of water to dissolve 1 part of land plaster.

Aluminum sulphate, on the other hand, is more soluble, requiring only about three parts of water to one of aluminum sulphate. The beneficial effect of the sulphates of calcium and aluminum appears to be due to the fact that the calcium and aluminum unite with the dissolved silicates in the soil to form inert and insoluble compounds. These silicates when united with the sodium have colloidal properties, which appear to be the chief cause of the difficulty in hardening and impermeability.

No recent event in the commercial world was accorded anywhere near as much space in the newspapers of the country as that given to the announcement that the U. S. Grain Growers, Inc., was to open grain sales agencies at terminal markets. The announcement was printed in newspapers and trade journals from New York to San Francisco. Inquiries have been received at the U. S. Grain Growers' office from importing firms representing prospective purchasers in several European countries since the information was made public.

SHIPMAN'S S. C. REDS

were winners of 2d and 4th cockerel at Denver show, Dec., 1921, also winning 6th and 8th cockerel at National Western Poultry Show, Denver, Jan., 1922. Setting eggs reduced to $3 setting. Ancona setting eggs $2 setting. S. C. Reds and Ancona baby chicks.

W. F. SHIPMAN,
Rt. 2, Box 586. Edgewater, Colo.

Willow Creek Poultry Farm

Breeder of highest grade heavy WINTER-LAYING SINGLE COMB WHITE LEGHORNS. Now booking orders for day-old chicks and hatching eggs from yearling hens on free range. Prices reasonable. Write for catalogue.

WILLOW CREEK POULTRY FARM,
Box 657. Lamar, Colo.

Telling Results

The season for planting is hardly started, and we have already sold five times last year's amount in seeds to farmers and gardeners around Denver alone. The reason is easily traced. Won't you let us also satisfy you? Write for free Catalogue and Price List.

The Rocky Mountain Seed Co.,
1325 15th Street. Denver, Colo.

Controlling Garden Pests.

Insects, fungus and bacterial diseases, troubling gardens and ornamental and fruit trees, number thousands, but their control is not so difficult as some may think. The beginner does not have to know all these pests by name and all their habits to hold them in check. Let him remember that most cankers, leaf spots, scabs, blights, wilts, mildews and rusts are the work of fungus or bacterial diseases and that insects are of two main types—those that eat holes and those that suck juices through a bill, and he has a fair chance of diagnosing accurately the general cause of his trouble.

Then let him remember that bordeaux mixture is a leading remedy for a considerable percentage of the diseases, arsenate of lead for the chewing insects and tobacco in one form or another for the sucking insects; let him provide himself with these materials and with a good dusting apparatus or liquid sprayer for putting them on and he is ready for the battle.

Let him remember that a vigorous offensive is often the best defensive and takes the battle into the enemy's territory. In other words, at first sight of the pest or its work, or even before, if he knows what is coming, spray with the right material or combination of materials. A little later spray again to keep the plant lightly coated with the material and thus protected from attack.

Farmers' and Stockmens' Exchange

Advertisements will be inserted in this department for 7c per word; four or more insertions, 5c a word each insertion. Remittances can be made by postoffice money order or personal check. Advertisements are set in uniform style, no display type or illustrations admitted under any circumstances. Every figure and initial counts as one word. Guaranteed circulation over 55,000 copies each issue. WESTERN FARM LIFE is issued semi-monthly the first and fifteenth of each month. Advertising copy for this department must reach us ten days before date of issue. It carries the most classified advertising because it gives you best results. Send us in a trial advertisement. Write for proof showing how these columns pay advertisers.

POULTRY

PLYMOUTH ROCKS.

PURE BARRED ROCKS, $2.50; EGGS, $1 SETTING; $5, 100. Ida Ham, Burden, Kan.

BARRED ROCK COCKERELS, $2.50 EACH; eggs, $1.50 setting, prepaid. Mabel Weller, Holton, Kan.

BARRED ROCK COCKERELS—THOMPSON'S imperial "Ringlet" strain, $5. Mrs. J. A. Graham, Ransom, Kan.

GET LEAFLETS DESCRIBING WEAVER'S FAMOUS White Plymouth Rocks; big prize winners. Harry Weaver, Lancaster, O.

FOR SALE—WHITE PLYMOUTH ROCKS; cockerels and setting eggs; prices reasonable. F. L. Toliver Stock Farm, Fort Collins, Colo.

BARRED ROCKS, RINGLETS; 34 PREMIUMS, 34 firsts. Cockerels, $3, $5, $7.50. Eggs, 15, $3; 30, $5. Mattie A. Gillespie, Clay Center, Kan.

HAVE FEW CHOICE WHITE COCKERELS LEFT, $2 to $4 each. Eggs $1.50 per setting of fifteen. Quality Fruit & Poultry Farm, Manzanola, Colo.

BARRED ROCK COCKERELS, CHICKS. RINGlet exhibition and trapnest strain. Record to 290, over 100 premiums. Eggs, 15, $2; 100, $8. A. G. Hammond, Vinland, Kan.

HICKS' BARRED AND WHITE ROCKS WON 50 premiums at Oklahoma and Kansas State shows in December and January in classes of 300. Eggs $3 and $5. Write for mating list. H. F. Hicks, Cambridge, Kan.

RHODE ISLAND REDS.

PURE LARGE DARK SINGLE RED COCKERELS, $2.50. Eggs, $1.25, 15; $6 per 100. Francis Downs, Talmage, Kan.

RHODE ISLAND RED HENS AND COCKERELS, both combs; eggs, $1.50 setting. Claude Musselmann, Lyons, Neb.

ROSE COMB REDS FROM THE BEST BREEDing, heavy layers; pen 1, 15 eggs $3.50; pen 2, 15 eggs, $2.50. J. F. Williams, Branson, Colo.

SINGLE COMB REDS, STATE SHOW AND CENtral Nebraska winners. Eggs, exhibition matings, 15, $3.50, $5; flock, 15, $2; 100, $8. Cockerels. Feemster, York, Neb.

S. C. REDS—TEN YEARS CAREFUL MATING for egg production; $2 per 15, $7 per 100. Special mating, $3 per 15. Cockerels all sold. L. A. Davids, Henderson, Colo., or Dr. F. S. Schoenleber, Stockyards, Denver.

RHODE ISLAND RED FARM—EXCLUSIVE breeders of thoroughbred Single Comb Rhode Island Red baby chicks and hatching eggs. Some fine cockerels for sale. All stock sold on a money-back guarantee. We are now booking orders for May and June delivery and can accept a few more for the latter part of April. Try Oregon Reds. Send for catalog. Rhode Island Red Farm, Rt. 6, Box 202, Portland, Ore.

ORPINGTONS.

BUFF ORPINGTONS, "PENNINGTON'S GOLDEN Beauty Strain," special trial offer, 15 eggs $2.50; three settings, $6.25; parcels post. Waverly Poultry Farm, Station B, Lincoln, Neb.

S. C. BUFF ORPINGTON EGGS; HENS OF OWen's breeding; cockerels direct; $2, 15; $10, 100; baby chicks, 20c; also 10-weeks-old cockerels and pullets. Mrs. Harry Steele, Wamego, Kan.

WHITE, BUFF AND BLACK ORPINGTONS—Won 22 prizes Missouri and Kansas State fairs, Heart of Ozarks show. Write for list of winnings and egg prices. J. H. Gibbs, Box 153, Redfield, Kan.

WYANDOTTES.

SILVER LACED WYANDOTTE EGGS, $5 A HUNdred. Mrs. Walter E. Christian, Route 5, Clyde, Kan.

WOOD'S SILVER WYANDOTTES, COCKERELS and eggs. Satisfaction guaranteed. Earl Wood, Gill, Colo.

WHITE WYANDOTTE HATCHING EGGS, $1 setting; $5 100, postpaid. Shedd's, Aurora, Colo.

EXCEPTIONAL QUALITY WHITE WYANDOTTE eggs; pen setting, $3; range setting, $1; 100, $5. Folder free. Richard Matoush, Julesburg, Colo.

CHOICE WHITE WYANDOTTE COCKERELS, good individuals for pens; some good stock for the farm flock, $3 to $5 while they last. E. Foster Strohm, Rt. 2, Wamego, Kan.

LEGHORNS.

WILSON'S BUFF LEGHORNS, 297 EGG-BRED winners. Write for mating list. Herb Wilson, Holton, Kan.

SINGLE COMB BROWN LEGHORN COCKERELS, $2; eggs, $6 100; baby chicks, $12 100. Mrs. A. Kamps, Harvard, Neb.

SINGLE COMB BROWN LEGHORN BANTAMS, fifteen eggs, $1, third zone prepaid. Males sold, exchange. G. F. Weaver, Cross Mountain, Colo.

SINGLE COMB WHITE LEGHORN CHICKS—From choice Hoganized flocks; heaviest winter layers; live delivery, postpaid, 14c. Wylie's Hatchery, Clay Center, Kan.

MINORCAS.

FINE SINGLE COMB BLACK MINORCAS—FINE Buff Orpingtons. Fertile eggs, 10 varieties. Baby chicks. Frank A. Agnew, Southside, Omaha, Neb.

LANGSHANS.

BLACK LANGSHAN COCKERELS, STANDARD bred since 1902; orders booked for eggs and chicks. Mrs. O. L. Summers, Beloit, Kan.

ANDALUSIANS.

"AMERICAN CHAMPION BLUE ANDALUSIANS" The beauty breed; layers the year round; winters. Setting eggs at $5 per 15. R. Trevor, 68 South Clarkson, Denver, Colo.

ANCONAS.

ANCONA EGGS, 6c EACH. FLEDA JENKINS, Jewell, Kan.

SUPERIOR LAYERS; CIRCULAR FREE. GOLDen Rule Ancona Farm, Carrollton, Mo.

EVERLAY ANCONAS—BRED FOR HIGHEST egg production; eggs, $5.50, 100; chicks, $15 100. Everlay Farm, Hale, Mo.

SEVERAL VARIETIES.

SPANISH STOCK OR EGGS; FIRST TRY US, our birds pay. J. S. Wilson, Spanish Specialist, Ridge Road, Brookport, N. Y.

SIXTY VARIETIES PRIZE-WINNING GEESE, ducks, turkeys, chickens. Stock eggs, cheap. F. Damann, Farmington, Minn.

NINETY BREEDS—POULTRY, EGGS, PIGEONS, dogs, baby chicks, parrots, ferrets, hares. Complete free folder. Bergey's Poultry Farm, Telford, Pa.

CIRCULAR NOW READY—GET YOURS AT once; mail us a card and we will send you one. It pays to get the best. Satisfaction guaranteed. DeKoster's Hatchery, Zeeland, Mich.

TURKEN—PART HEN, PART TURKEY; BIG layers; 14-pounders; dime for photos, prices. White Rocks, none better. Halback and Fishel strains. Turken, West Plains, Mo.

IF IT WEARS FEATHERS WE HAVE IT OR will get it for you. Spangled Hamburgs. March hatch Barred Rock and White Wyandotte pullets. Extra choice lot cockerels priced right. Champney's Poultry Yards, 2057 S. Broadway, Denver.

BABY CHICKS.

HUNT FOR HUNT'S BABY CHICKS. HUNT Hatchery, Olaflin, Kan.

WHITE WYANDOTTE EGGS, $5 PER 100. MRS. G. H. Bogenhagen, Cheyenne Wells, Colo.

PUREBRED CHICKS, 9c UP; EIGHT VARIEties; gauranteed; postpaid. Catalog free. Rex Poultry Co., Olinton, Mo.

PUREBRED S. C. BROWN LEGHORN BABY chicks, 10c each. Eggs, $4 per 100. Mrs. V. Young, Melvern, Kan.

CHICKS—FROM BIGBONED ROSE COMB RED, Hogan tested, heavy layers, 16c prepaid. Mrs. Alex Leitch, Parkerville, Kan.

PUREBRED CHICKS, BARRED AND WHITE Rocks, White Leghorns, White Wyandottes and Black Langshans, 12c each and up, postpaid. Catalog free. Earl Summa, Gentry, Mo.

BABY CHICKS FROM WINTER LAYERS, LEADing varieties; husky, vigorous kind; new prices; safe arrival guaranteed. Catalog free. Sarver Poultry Farm, Hastings, Neb.

SUPERIOR QUALITY BABY CHICKS, S. C. White Leghorns, S. C. Reds. Write for circular. Belleview Poultry Ranch, 244 W. Belleview, Box W, Littleton, Colo.

PUREBRED SINGLE COMB BROWN LEGHORNS —Baby chicks, $15 per 100, prepaid. Eggs, $5 per 100, from yearling range hens. Hogan tested. T. A. Waugh, Superior, Neb.

QUALITY CHICKS—WHITE AND BROWN LEGhorns, 11c; Reds and Barred Rocks, 12c; White Rocks and Anconas, 13c; Buff Orpingtons, 14c. Fleda Jenkins, Jewell, Kan.

LEADING VARIETIES—GUARANTEED FROM high producing standard flocks. Highest values, reasonable prices. Circular. Quality Poultry Products Farm, Leavenworth, Kan.

THOMPSON STRAIN RINGLET ROCK BABY chicks, 12c; also good blood Single Comb Brown Leghorns, 10c. Hatching season till June 1. Mrs. Reube Wilson, Melvern, Kan.

CHAMPNEY'S QUALITY BABY CHICKS—ALL leading varieties at popular prices; can ship with no delay; guarantee live delivery. Champney's Poultry Yards, 2057 S. Broadway, Denver.

BABY CHICKS FROM HOGANIZED STANDARD bred flocks Barred Rocks, White Rocks, R. I. Reds, White Wyandottes, Buff Orpingtons, Anconas and White Leghorns, from $10.50 up. Catalog. Sieb's Hatchery, Lincoln, Ill.

S. C. WHITE LEGHORN BABY CHICKS, 16c, postpaid and safe arrival guaranteed—from my own stock, strong, healthy, and good layers. Terms, 25% with order, balance before shipping. Order early to get chicks on date when wanted. Ivar Johnson, Fremont, Neb.

COLUMBIA HATCHERY, P. O. BOX 1102, DENver, Colo. We can supply you with any quantity of baby chicks. Capacity 10,000 weekly; 17 varieties; live delivery guaranteed; parcel post prepaid. Write for prices and full particulars.

PUREBRED—ALL LEADING VARIETIES, FROM heavy laying strains; prepaid; 100% live delivery anywhere. Satisfied customers in 30 states. Satisfaction guaranteed. Send for illustrated catalog. Loup Valley Hatchery, Box 140, Cushing, Neb.

PUREBRED TOM BARRON STRAIN ENGLISH White Leghorns, from extra selected heavy producing stock; excellent winter layers; $13 per hundred, shipped parcel post, live delivery guaranteed. Johnson's Hatchery, 109 Buchanan St., Topeka, Kan.

PUREBRED BABY CHICKS—PRICES ARE down; Barred White and Buff Rocks, S. C. and R. C. Reds, White Wyandottes, Buff Orpingtons, S. C. Black Minorcas, $16 per 100; S. C. White Leghorns and Anconas, $15 per 100; prepaid parcel post. Kansas Poultry Co., Norton, Kans.

BUFF LEGHORN BABY CHICKS—MY TWELVE years' experience with the Buffs has fully demonstrated to my entire satisfaction that they are just what I call them—Best Layers on Earth. Get in on a good thing and try them. You will never regret it. Champney's Poultry Yards, 2057 So. Broadway, Denver.

BABY CHICKS—SEND AT ONCE FOR PRICES of purebred chicks from Hogan tested flocks. We have all leading breeds hatching each week and can fill orders on short notice. Live delivery guaranteed and shipping charges prepaid. Prices are lower and quality better. Denver Baby Chick Co., 2436 W. 43d ave., Denver, Colo. Phone Gallup 1702.

EGGS AND BABY CHICKS.

BUFF ROCK HATCHING EGGS. EMERY SMALL, Wilson, Kan.

PURE BLACK LANGSHAN EGGS, PREPAID. Mary McCaul, Elk City, Kan.

BUFF ORPINGTON EGGS, 105, $6; CHICKS, 15c. L. J. Clanin, Jewell, Kan.

R. C. REDS—EGGS, 105, $5; CHICKS, 14c—Linnie Clanin, Jewell, Kan.

SILVER WYANDOTTES—15 EGGS, $1.50, POSTpaid. L. D. Bailey, Girard, Kan.

"RINGLET" BARRED ROCK EGGS, 100, $6. Mrs. Lynn Bailey, Lyndon, Kan.

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BARRED ROCK EGGS FOR HATCHING, $4.50 hundred. Roy Black, Pauline, Neb.

S. C. WHITE LEGHORN EGGS, $5 PER 100. Vernon Carlson, Rt. 1, Boulder, Colo.

CHOICE ROSE COMB BROWN LEGHORN EGGS, 5c each. Mrs. Ed Kelley, Dunlap, Kan.

PUREBRED ROSE BROWN LEGHORN EGGS, $8; chicks, $15. James Sedlock, Ord, Neb.

OWEN STRAIN S. C. BUFF ORPINGTON EGGS, 7 cents each. Dan Daniels, Winston, Mont.

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ROSE COMB REDS, BRED LAYERS; EGGS, 15, $1.25; 30, $2. Ada Hopper, Branson, Colo.

S. C. WHITE LEGHORN CHICKS, 12c; EGGS, $4.50 per 100. Clanin Hatchery, Jewell, Kan.

EGGS—PUREBRED LIGHT BRAHMA, 15, $1.50; 50, $4; 100, $7. Mrs. Grace Buskirk, Pender, Neb.

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FOR SALE—WHITE LEGHORN EGGS, $3.50 per 100; 60c per setting. T. S. Jones, Fort Collins, Colo.

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COLUMBIAN WYANDOTTE EGGS, $1.50, 15; $4, 50; $7, 100. Pen, $2.50, 15. Cyril Sterner, Bradshaw, Neb.

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Onions at High Altitude.

Can onions be raised successfully in this section? The altitude is about 7,500 feet.—A. L. J., Teller county, Colo.

We do not recommend very highly the growing of this crop at elevations of 8,000 feet, but it is possible to grow it to some extent.—Prof. R. A. McGinty, C. A. C.

If in need of advice, ask Western Farm Life Service Bureau.

Calf Club Produces Prize Bull.

At the recent round-up sale of Herefords in Kansas City, in which more than 500 head of registered animals were sold at auction, one curly-coated, heavy-boned yearling bull attracted much attention. In the ring the competition between buyers from Texas, Missouri, Colorado, Kentucky and South America was keen. The bull finally went to a South American for $1,025. Inquiry revealed that this young bull's mother belonged to Margaret M. Hemphill of Olathe, Kan., and was one of twenty-nine registered Hereford heifers purchased from John Painter of Roggen, Colo., three years ago and taken to Johnson county, Kan., to be distributed to boys and girls of a calf club organized and financed largely through E. S. Moser. These heifers cost, including freight and other expenses, about $300 a head. They were purchased by a representative of the American Hereford Cattle Breeders' association.

The heifers were graded, classified, and delivered to the club members May 17, 1919. Each club member was supplied with a tabulated pedigree of his or her heifer and a booklet of instructions in regard to proper feeding and management. In the fall of the same year the heifers were assembled and again graded and classified and awards of prizes made on the basis of individuality and improvement made. All the heifers were put up and sold at auction, each club member having the privilege of bidding on his or her heifer. Eleven of the members bought back their heifers. The average price was $428.

That a club heifer owned and developed by a little girl should develop into a cow capable of producing a bull of sufficient merit to bring more than a thousand dollars from a discriminating South American buyer is evidence enough of the benefits to come from a club of this kind. The greatest good, however, came from the fact that the girl's father and brother became interested in better cattle and now own a select herd of registered Herefords. Several other herds were started in this section at the same time and it would be hard to estimate the results which may come from this one club in ten years' time. Good registered cattle can be purchased for considerable less money than when this club was started. Breeders who want to help their chosen breed could do it in no better way than to promote a calf club such as this one.

Seeding Irrigated Pastures.

Tame pastures should be seeded early in the spring, in fact, for best results the seed should have been sown before the present time. Experience has taught that it is best to get the grass in early so as to have the advantage of the cooler weather and the early spring rains. Aside from weather conditions, over which the farmer has no control, the preparation of the seed bed, the seeding and the care of the pasture after seeding, are the important factors in getting a tame pasture started.

The best results will come from seeding on soils in a high state of cultivation. Only poor results can be expected from seeding tame grass on poor soil. The seed bed should be prepared when the ground will work up fine and mellow, which only occurs occasionally during the spring season. Too many only partially prepare the seed bed before sowing, attempting to finish the preparation afterward.

Specialists of the Colorado Agricultural college as a result of careful studies of getting tame pastures started, recommend that fall-plowed land be used if possible, as the weathering effect of the winter season leaves the surface soil in ideal condition for plant growth. There also is less danger of the fall-plowed soil crusting. If necessary to plow in the spring, avoid the turning up of fresh subsoil. Grass seed will not take kindly to raw soil. It is a good plan to disk ground before plowing. This makes it possible to obtain a firmer seed beed. A spike-tooth harrow is the best tool to use in firming a seed bed. It is difficult to get a good seed bed for grass on cloddy ground. Clods must be pulverized before they can be brought to seed bed condition. Some use a roller to crush clods, but this frequently is a dangerous tool to use unless it is applied at the right time. On dry and light soils a roller is a good tool. A corrugated roller or packer is better than one of the ordinary type. A study of the methods used in the beet growing sections of Colorado showed that only 17 per cent of the farmers used the roller to firm seed beds, and it was used mainly in the lighter soils around Greeley. A roller or a float may leave the surface of the soil in what appears to be good seed bed conditions, but the condition underneath is seldom what it should be. A properly firmed seed bed should contain few air spaces and provide good capillary conditions which are necessary for plant growth.

It is recommended that a float or drag be used to level the ground. It pays to take some pains in leveling for a permanent pasture or meadow. After the roller, float or drag has been used, harrow lightly so as to break up the smooth surface.

The experience of the Agricultural college specialists has taught that it is best to seed tame grass mixtures broadcast in two seedings, the light seeds such as brome, orchard grass and meadow fescue in one seeding, and the timothy and sweet clover in the second seeding, covering lightly with the harrow. It is advisable to seed with a light nurse crop, such as one-third the usual seeding of oats. Drills can be used if the grass seed box is on the rear of the main grain box.

The nurse crop should be removed as soon as it is cut for hay. It is not safe to pasture the first season, no matter how good the pasture may look, and it is best to take a crop of hay off the second season. If a good sod is established it can be pastured lightly the second season, but stock should not be turned on until the grass is from six to eight inches high.

In summing up the essential conditions to getting a tame pasture started, the Agricultural college authorities have the following to say:

"First select a good fertile plot, prepare a firm seedbed, seed in two seedings, cover with a harrow and keep all stock off the first year and also the second unless you have an exceptionally good sod. Take particular pains with this work, as it will not have to be repeated for twelve or more years. The college pasture seeded in 1909 is still carrying two animals to the acre through the pasture season. Look upon the tame pasture as a permanent fixture and handle it accordingly."

The grasses to seed are what is known as Prof. Morton's grass mixture, which has been given several times in Western Farm Life this spring. It will cost at the rate of about $8 an acre, allowing fifty pounds of the mixture to the acre.

Kill Pocket Gophers.

Now is the time to go after the pocket gophers, for they are mating and soon will be rearing their young. These pests do a great deal of damage to alfalfa and other crops. Trapping is the surest way to get the gophers in the valleys and on the plains according to W. L. Burnett, state entomologist. The mountain species may be easily poisoned.

In trapping select only the freshest mounds for the sets. With a sharp-pointed iron or hardwood prod locate the opening which leads from the mound to the large runway. Clean out this opening until the main runway is reached, where two holes will lead off horizontally. The hole should be made large enough so that the arm may be used to clean out all loose dirt where the trap is to be set. Set a trap, secured with a light chain and wire stake, in each of the two holes leading away from the lateral. After the traps are set plug up the surface opening with a wad of newspaper and cover with dirt and leave the traps for one day.

There are a number of different types of pocket gopher traps on the market. To be successful in trapping the directions must be carefully followed.

Break in the Colts Now.

If the two and three year old colts to be worked this year have not been broken to harness, they should be given attention at the first opportunity. Begin easy with them; remembering that a work horse is often made or marred by the way he is handled in breaking. When they become reconciled to the feel of the harness, set them at light work. Hitch the colt or the team to a skid of some sort and give the first lesson in pulling. As soon as it can be done safely, hitch them to the wagon for light hauling. Patience may be required to get a colt to behave well in harness, but a good draft horse will be the result.

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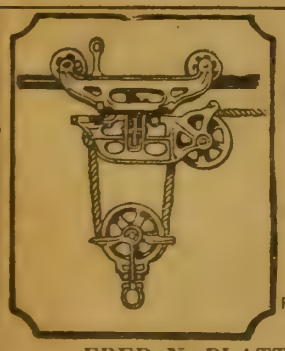

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Grain Growers' Policies Outlined

NEW OFFICERS PROMISE INCREASED EFFICIENCY AND ECONOMY OF ADMINISTRATION.

FOLLOWING the annual meeting of the U. S. Grain Growers, in which the Gustafson faction was supported by a majority of the delegates present, the newly elected board has got down to business and announced that it proposes to carry out as fully as possible the original plan worked out by the Committee of Seventeen and ratified by the various organizations represented at the ratification meeting a year ago. The new officers promise an economical business administration of the big farmer-owned co-operative marketing agency. The following signed statement has been given out by President C. H. Gustafson, Vice President James K. Mason, and Secretary Frank M. Myers:

"The results of the first national convention of the U. S. Grain Growers, Inc., are necessarily of very great interest to the grain producers of the United States. Naturally, they want to know from official sources what has taken place and how the results will affect the future policy of the organization.

"First, it should be understood that there is no disposition on the part of the present U. S. Grain Gowers' administration to flout their victory in the faces of those who held contrary views. This is a time for co-operation and not for emphasizind differences. The daily press, while entitled to great credit for attempting to state the facts fairly, could not be expected to understand the involved details and presented the essential points somewhat superficially.

Changes in Board.

It is true that some radical changes were made in the Board of Directors. It should be remembered that the new board was selected by delegates representing the membership of the U. S. Grain Growers. Naturally, directors from grain states appointed last year from producing sections where organization work has not been conducted, had to be supplemented by others. Among those appointed were those who favored a 100 per cent compulsory pooling system of marketing, whereas the Committee of Seventeen plan supposedly committed the directors to the optional methods approved by the Ratification Conference.

"While the question of compulsory pooling was not a direct issue at the national convention, nevertheless, the time had come when the directorate of the U. S. Grain Growers had to be either whole-heartedly in favor of a pooling plan or in favor of the plan of the Committee of Seventeen. That question was decided by the 41,000 or more farmer members who are the U. S. Grain Growers, speaking through their delegates at the national convention. When it is considered that in the states of Indiana, Illinois, Iowa, Nebraska, Kansas, Missouri and South Dakota with more than four-fifths of the total membership, less than 1 per cent of the members have chosen the pooling option method in the U. S. Grain Growers' contract, it is not difficult to understand the results of this convention. It was but natural that the majority of delegates should return a Board of Directors who unmistakably reflected that viewpoint.

Retrenchment Promised.

"The new Board of Directors went to work at once making arrangements for carrying out the decisions of the convention. Retrenchments on expenditures will be made at a very early date. Efficiency will be furthered in every department to the end that never again may there be the slightest ground for the accusation, even by our enemies, that the affairs of the corporation are not being properly administered. Consideration of economy and business-like administration of the affairs of the company are now in the hands of a special committee.

"The newly incorporated U. S. Grain Growers' Sales company which will handle the grain of the members, was given careful consideration by the new board and action taken to establish operating offices in the various terminal markets at the earliest possible date. It is fully expected that this company will be in a position to market grain in several of the large markets within 90 days.

Will Not Sacrifice Plan.

"We expect to follow the same policy this year as in the past with respect to our relationships with other organizations. We will continue to sell our own goods and let the other fellow sell his. We are anxious to co-operate and work in harmony with every other farmers' organization, but we are determined that the ideal of the Farmers' Marketing Committee of Seventeen for a national program of co-operative grain marketing shall not be defeated. While we will attempt to make use of every existing farmers' terminal marketing organization, we will not do so at the expense of sacrificing the original plan of the Committee of Seventeen. We are convinced that that plan is fundamentally sound and that it will succeed.

"The prospects for success were never brighter than at this present time. Several dark clouds which have threatened the organization during the past year were blown away during the convention. We are meeting the new year cheerfully and optimistically and with full confidence that the American grain grower will see realized his dream of a more efficient and equitable system of grain marketing. Now that our course is definitely charted, we feel that we are in a better position to ask for the support of all grain growers.

"The Board of Directors and officers of the U. S. Grain Growers take this opportunity to express their sincere gratitude and to thank all farmers and farmers' organizations who have consistently and loyally supported this work during the past year. We trust that our efforts will merit confidence and continued support during the coming year. With the support of grain growers, the U. S. Grain Growers, Inc., will develop a system of marketing that will be of lasting benefit to American agriculture."

U. S. Grain Growers, Inc., Planning to Sell Grain.

(Continued from Page 6.)

elected a director. "To my mind," continued Mr. Pancake, "the intensity of this struggle revealed the fact that farmers at home had sent men to the convention with backbone enough to dare to maintain a principle. The main principle held for by one faction was to carry out the purposes and plans of the Committee of Seventeen, which were built around the idea of using the co-operative elevators and all existing machinery and also the idea of allowing every farmer the right to choose the method of selling his own grain. The other faction stood more or less for the pooling idea. The most extreme were the 100 per cent poolers of the National Wheat Growers' association and the Northwest Wheat Growers' association. The second principle which was made an issue was the one of representation of the different states. The administration group stood for each state having representation on the board with additional directors apportioned among the states having the larger number of members signed. It was proposed that the additional directors come from these states in proportion to the number of growers signed. To do less would have robbed Minnesota, Colorado, Kansas and South Dakota of representation.

"During the greater part of four days these two groups struggled for their respective ideas and principles. Representatives of the Illinois Agricultural Association in a general way consorted with the poolers. Colorado, Missouri, Iowa, Nebraska, South Dakota, Minnesota, Indiana and Ohio representatives largely made up the group for state representation and for carrying out the purposes of the Committee of Seventeen. In the end the states with large membership obtained the additional ten directors.

"To the uninitiated it would seem that the convention was a mere jockeying for power and position, but to the delegates it was a struggle to maintain principles vital to the life of the U. S. Grain Growers, Ins., and a loss of these principles meant its death and a turning over of the whole co-operative marketing program to those whose sympathies if not avowed purposes were in line with the pooling idea. It is a significant fact that of the 50,000 members signing the growers' contracts very few elected the pooling method of selling. In Iowa, Colorado, Nebraska, Missouri, Indiana and Minnesota no pooling contracts have been signed."

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Dairying and Hog Raising

All letters regarding commercial and technical features of dairy farming and hog production promptly answered. Address all communications to Dairy Department, Western Farm Life, Denver, Colorado.

An organization of prominent Alamosa bankers and business men has perfected plans to buy some good dairy cows and resell them on time to reliable farmers in the San Luis valley. This will help to introduce dairying into this section. Let the good work go on.

The hypocricy which some dairymen show when they buy oleomargarin reminds one of the poor fellow who was shipwrecked on a lonely island. He was hunting in the brush for berries when suddenly he heard human voices. Thinking it was cannibals he dropped to the ground just in time to hear: "You—why in—— didn't you play that high card?" "Thank God!" exclaimed the lost one, "they are Christians!" Some dairymen are just as badly misnamed. —Hoard's Dairyman.

Silo More Corn.

Farmers in the Middle West in view of the overproduction of corn the past two years, are considering the question of reducing their acreage this year. Those who have silos in which to place their corn need not worry over this question, as they have a sure outlet for the crop as feed for dairy cows and other livestock. Colorado and the mountain states, where silage crops can be grown, have not yet reached the limit for silos. Wherever livestock is handled and silage crops can be grown, the silo is a feed-saving piece of equipment. The more corn we put into the silo the less we need to worry about the market price of corn. Corn can be put into a silo and made into good feed even though it be damaged and of little value for grain. In Colorado it would be far wiser to put more corn into silos rather than to reduce the acreage of this splendid feed crop.

Silage Substitute in High Altitudes.

It is hard to overestimate the value and importance if silage, especially for milk cows. It gives them the equivalent of green pastures all winter long. But there are so few silage crops that can be raised in the mountains that silos are impracticable for these sections. As a substitute root crops of only slightly less yield and value can be raised easily and surely and stored in cellars.

Carrots, turnips and rutabagas are the best roots for feeding purposes. A limited quantity of potatoes can be fed with advantage. But the king of the roots is the rutabaga. The seed of the rutabaga is so small that a pound will sow an acre if planted with a garden drill, and will cost but 60 cents. An acre produces from twelve to twenty-five tons. Sixteen tons, or a respectable yield from one acre, will give eight cows green pasture, or the equivalent for six months.

Hay and roots should be fed in about equal weights. How many acres of hay would you have to cut, cure, and put up to match one acre of rutabagas? What acre on the ranch can show returns equal to those from this acre of purple tops? Two ounces of these little hard, round, black seeds, will make a cow contented, healthy, and productive all winter.

If you can find a strip of sloping land with a dark brown loam soil, inclined to be moist, plant it to rutabagas about the middle of May and fill your cellar on November 1. Your gratification will last another six months.—Gordon Kent.

Magnitude of the Dairy Industry.

Colorado's dairy products in 1920 were valued at $28,756,967, says F. E. Ball, field man for the State Dairy Commission, or two and one-fourth times the value of the year's output of gold, in fact equaling the value of the total output of gold, silver and copper for the year. And yet the residents of other states usually think of Colorado as a state in which the mining interest leads. It ranks second place in gold production, fifth in silver, and tenth in copper.

The dairy industry in Colorado has been steadily increasing in importance during the last few years. From figures given out by the State Dairy Commission the number of dairy cows in the state has increased from 144,784 in 1910 to 272,000 in 1920. During that year there were in operation in the state seventy-nine creameries, fourteen cheese factories, two process butter plants, five condenseries, one oleomargarine plant, sixty ice cream plants, two dried milk plants and 360 cream and milk receiving stations. One of the duties of the State Dairy Commission is to inspect the sanitary conditions of all these plants and check on their methods of operation.

By an act of the legislature the enforcement of the dairy laws in the state was put under the State Dairy Commission, the act making the head of the animal husbandry department of the Colorado Agricultural college, State Dairy Commissioner. Professor Geo. E. Morton, who holds that position at the present time, has under him one deputy commissioner, four inspectors, an analyst, and a field man. While by law required to enforce various regulations, the commission desires to be looked upon as having more of an educational program to carry out than merely as a law enforcing organization. In addition to the police duties of the commission it carries on extension and development work in dairying, such as aiding in forming cow testing associations, bull associations, selection of dairy animals, boosting for the introduction of purebred sires, helping with milk campaigns, dairy day shows, butter scoring demonstrations and other activities designed to promote and foster the development of the dairy industry in the state.

National Holstein Convention.

Holstein men are looking forward to the educational dairy exhibit and sale of 150 choice Holstein cattle from all over the United States as one of the features of the annual convention of the Holstein-Friesian Association of America, to be held in Kansas City, June 4 to June 10. This is the first time this annual meeting has been held in the Midwest. The National Dairy Council, having headquarters in Chicago, will have an educational exhibit showing the profits to be derived from the dairy business as compared to other lines of farming. There also will be highly educational exhibits prepared by the agricultural colleges of Kansas, Missouri, Oklahoma and Nebraska, showing modern methods of dairying.

The various states will be permitted to enter animals in the sale in proportion to the number of registered Holsteins they have. The animals entered must be selected by the state associations and must have records of from 12,000 to 20,000 pounds of milk, or 600 to 1,000 pounds of butter annually, depending on their ages. Young heifers not in milk must have dams meeting these requirements.

A steering committee of Kansas and Missouri Holstein breeders has been organized to work in promoting this big show and convention. Harlo J. Fisk, chairman of the finance committee for the convention, has established an office at 121 West Eleventh street, Kansas City, Mo., and this office will devote its entire time for the next four months in promoting the Holstein breed and the coming convention.

Pig Club Making Progress.

Growing out a litter of pigs and showing in the fat barrow class at the National Western Stock show in Denver next January is a goal toward which the members of the "Blue Ribbon Pig Club" of the Elbert community, Elbert county, Colo., are working. The twelve members of this club are banded together for the purpose of improving the quality and increasing the number of hogs in their community.

This club was organized last July and reorganized for 1922 recently, with the election of Sharon Litherland as president, and Beryl West as secretary-treasurer. Duroc gilts, eight weeks old, were purchased last July and every pig has developed wonderfully under the care of the boys. A club show was held last October in connection with the Elbert County Shorthorn breeders' sale, at which time prizes were awarded. These prizes were donated by Elbert merchants who are pushing pig club work. The fathers of these boys are co-operating with them and are themselves becoming interested in better hogs.

The gilts have been bred to a Pathfinder Sensation boar belonging to the father of one of the boys. Each boy is to grow out his litter of pigs and to

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make a selection therefrom for the fat barrow classes at the next National Western Stock show.

Meetings are held every second and fourth Saturday of each month at the different homes. County Agent A. W. Aicher and the fathers meet with the boys to discuss methods of feeding and care of their pigs. O. P. Philips is serving as the very efficient leader of this club. The boys have been taught the good points of a breeding gilt and have scored their own gilts carefully. Judging of breeding stock and fat swine is being taken up this year. The boys will visit the principal Duroc herds in the community, in line with the plan to give them first hand practical information on all points in the breeding of swine, and the care, feeding and fattening for market.

The members of the club are Milton Phillips, Sharon Litherland, Beryl West, John Adams, Lloyd Williams, Loren Adams, Leslie Cornforth, Cecil Draney, Ralph Litherland, Wesley Fickle, Carl Phillips and Floyd Phillips.

A New Dairy Association.

A new dairy association has been organized by the progressive farmers of the Wellington district of Larimer county. The forming of this association is the first step toward building up a dairy center in this locality. This new organization starts off with twenty-eight charter members. C. B. Orcutt was elected president, and F. M. Marsh secretary-treasurer. A cheese factory project was discussed at the organization meeting and the executive committee was authorized to investigate the company proposing to locate a plant in the community. Eight farmers pledged the milk from ninety-six cows as a starter for the factory. It is proposed to raise the $1,400 for the factory building among the dairymen who will sell milk, payments to be made in the form of deductions from their monthly milk checks.

Increasing Milk Consumption.

Increasing milk consumption through extensive educational campaigns is one of the valuable services the National Dairy Council is rendering the dairy industry of the country. This council is financed by dairy organizations and dairy interests of the country and it will be interesting to learn of the results of these various campaigns. In order to determine the effectiveness of the work it is doing it has been the practice to check up on the increased sales of milk where campaigns have been conducted.

Before beginning a campaign for increased milk consumption the Council has taken a survey of the amount of milk being consumed. At the close of the campaign or after it has been going from three to six months another survey is made in order to learn what has happened in the milk distributing plants and in the homes. A tabulation of figures from six plants located in one of the campaign cities, showed that their total sales before the campaign for a given period amounted to 1,164,703 pounds, and for the same period after the campaign 1,312,175 pounds. This shows an increase of 12½ per cent in the milk consumed as a result of a three months' campaign. Most of the money for this work has been furnished by producers and milk dealers, and the results would indicate that it has been money well spent.

Holstein Calf Club Man.

Holstein calf clubs are to be promoted actively by the Holstein-Friesian Association of America this year. Earl J. Cooper, a graduate of the agricultural college of Wisconsin has just been appointed to take charge of this club work under the direction of President Lowden. Mr. Cooper already has had considerable experience in club work and is thoroughly competent to carry out successfully calf club projects. He began his duties March 15 and has as his headquarters the extension offices of the Holstein association at 921 So. Michigan Ave., Chicago, Ill.

Hogs on Dry Farm.

As I have been a breeder of purebred hogs for twenty-five years, will tell of my experience as a pork producer on a dry farm. I started by buying bred sows, but think a cheaper way would be to buy pigs when twelve weeks old, as a great deal can be saved on the express charges where breeding stock has to be shipped in. For a pasture, sow fall rye. It makes a good spring pasture and about May 15 sow Sudan grass, so that when the rye is gone the Sudan grass comes and makes green feed all summer. I sow about five pounds of seed to the acre.

I keep all registered sows and have them farrow in March. I feed them ground barley and alfalfa hay and a little tankage, which keeps them from eating their little pigs. I also let them have plenty of exercise. The farrowing pens are made very cheap by digging them in the ground about three feet deep and using poles and straw for the top. There is no cash outlay in making a pen of this kind. I keep my early pigs in these pens regardless of the cold weather and also place my sow in the pen about three days before farrowing. The sows should be fed very light for four or five days after farrowing, giving them such feed as bran mash and ground barley, increasing the feed as the pigs grow older. When the pigs are four weeks old I place a trough in a pen near by and start the little pigs to eat by feeding them soaked feed, ground barley and shorts made into a slop with a little tankage, which takes the place of milk. When eight to ten weeks old they are weaned and then I turn them out on the pasture, feeding them the same fed I startd them with. When four months old I cull the best pigs out and sell them as breeding stock. The remainder are turned into a corn field until fat and then are sold. Pigs handled in this way will weigh 180 to 200 pounds when six months old. Hogs of this weight always top the market.

I raise two litters a year and have my fall pigs farrowed in September and carry them through the winter on barley, oats and rye, with a little corn and tankage and alfalfa hay. In the spring I repeat culling and selling the best for breeding stock, fattening the balance for June markets. I use sheds for my fall pigs, made out of straw, poles and dirt. I put only ten pigs in each pen. I find that it takes more feed and better care to raise fall pigs than spring pigs, but one has more time to look after them in winter and they are more profitable. As to breed, I prefer the Spotted Poland China. They raise large litters and no runts are found among their pigs. They are a tame, gentle hog, and nice to handle and keep in pens.—B. S. Brown, Wyoming.

Market Outlook for Farm and Ranch Products.

(Continued from Page 7.)

mark around the middle of April. With prices comparatively stable, speculative buying has broadened and the movement into cold storage has expanded rapidly, although holdings at the four leading cities are much less than at this time last year when the storing season began a week or two earlier. Country dealers in eggs have become bullish on the market and in some cases prices at country points have been above those in the larger cities. A similar situation developed last year at about the time the egg market reached bottom.

Kansas City: Eggs—Firsts, 21½c; seconds, 18c. Live poultry—Springs, 28c; heavy hens, 23c; roosters, 13c. Ducks, 25c.

Denver: Eggs, 25c. Hens, 25c; springs, 38c; roosters, 15c. Geese, 30c. Ducks, 30c.

Butter Supply Becoming Excessive.

Although the demand for butter has expanded recently, the supply has increased rather steadily during the last two weeks and the four leading cities are now receiving much more butter than usual at this season of the year. Buyers are taking less storage butter and are turning to fresh butter, particularly of the medium and undergrades, so that the effect of the liberal supply has been more noticeable on the fancy scores. The supply of cold storage butter is considerably below the average for this season, but it is not as small as it usually becomes before the storing season begins. Ordinarily storage stocks do not begin to increase until the latter part of April or the first part of May. The California market particularly has been weak recently, as the season is earlier in that state than in the Middle West, and California butter has been offered for shipment to the East. The decline in prices is of a seasonal character and probably has not yet run its course. The high point in receipts of butter generally arrives in June.

Prices for 92-score fresh butter on April 4 are as follows: Chicago, 35c; New York, 35½c; Philadelphia, 36¼c.

Potato Shipments Remain Large.

The potato market has been slow, dull and slightly lower, with the supply of old potatoes arriving at distributing centers about 50 per cent greater than last year and considerably above the average for this season. New potatoes also are coming forward more rapidly than usual at this time of the year and the acreage in the early and intermediate states is 18 per cent larger than a year ago. Round whites are quoted at $1.50 to $1.65 per 100 pounds sacked in Chicago, and $1.30 to $1.50 at north central shipping points. Sacked Brown Beauties, U. S. Grade No. 1, at Chicago are quoted at $1.75, Rurals at $1.70 to $1.75, and Russets at $2 to $2.10.

Colorado Farmers Feeding Steers Under Contract.

(Continued from Page 3.)

they would eat which kept them in ideal condition and gave them an appetite for the other feed. They also had alfalfa hay, but did not eat much. To get them to eating a little more grain we scattered shelled corn in the feed bunks and for the past three weeks have been grinding the corn cob and all and adding about nine pounds a day of chop. Grinding the feed has stimulated their appetites and they are cleaning up their feed as eagerly as earlier in the feeding period."

Silage Important Part of Ration.

These cattle have cleaned up about thirty bushels of corn to the animal, most of which was grown on the ranch without irrigation. The two silos with a capacity of 240 tons were filled from the sixty acres of corn, and the remainder snapped for the cattle and hogs. The crop was partly Minnesota 13 which produced thirty-five bushels to the acre, the average being about twenty. Additional corn was purchased in the field at $3 an acre. Up to December 1, $1,200 worth of hogs had been sold. "We never have let these cattle get uncomfortable for lack of bedding," said Mr. Dunlap. "Even in stormy weather they could lie down in comfort behind the straw windbreak."

From present market indications these cattle should bring $8 a hundred or better on a Missouri river market. They have not been weighed, but good judges place them at 1,200 pounds at the present time. With a 300-pound gain the feeder will get from $22 to $25 a head for the feed he has put into the cattle, and the owner will get the advance on the original weight into the feed lot. Mr. Braiden has about $6 freight and marketing expense a head in these cattle and $1.50 interest. From present indications he should receive a net advance over last year's value as feeders of $8 or $9 a head.

Mr. Braiden hopes to have a thousand cattle fed on some form of contract next year if he can locate men with experience in handling cattle willing to share with him the possible profits of finishing them or putting them in condition to bring more on the market than in the fall. It would seem to offer a man with feed the opportunity to put it into cattle with the minimum of risk and no capital other than what he might have in feed racks, yards, and sheds or windbreaks.

Recent Range of Livestock Prices at Our Principal Markets.

Cattle—	Denver.	Kansas City.	Omaha.
Choice and prime heavy steers (1100 lb. up).	.....	$8.10@ 8.85	$8.00@ 8.65
Good heavy steers	.....	7.30@ 8.25	7.35@ 8.15
Medium heavy steers	6.75@ 7.50	6.85@ 7.50	6.85@ 7.50
Common heavy steers	5.75@ 6.75	6.15@ 7.00	6.25@ 7.00
Choice & prime light steers (1100 lb. down)..	.....	7.90@ 8.75	8.00@ 9.00
Good light steers	.....	7.15@ 8.15	7.25@ 8.25
Medium light steers	6.50@ 7.50	6.75@ 7.40	6.75@ 7.50
Common light steers	5.50@ 6.50	6.00@ 6.90	6.25@ 7.00
Common to choice butcher heifers	4.50@ 7.50	4.65@ 7.35	4.75@ 7.50
Common to choice butcher cows	3.50@ 6.00	4.10@ 6.25	4.25@ 6.65
Bologna and beef bulls	2.50@ 5.00	3.25@ 5.25	3.25@ 5.25
Canners and cutters, cows and heifers	2.00@ 3.50	2.60@ 4.25	2.50@ 4.25
Canner Steers	3.50@ 4.50	3.25@ 4.00	3.25@ 4.50
Medium to choice light veals	8.00@11.00	5.50@ 9.00	7.50@ 9.50
Common to choice heavy veals	3.50@ 8.00	3.00@ 8.00	5.00@ 7.75
Common to choice feeders (1000 lb. up)	5.50@ 7.00	5.60@ 7.65	5.75@ 7.75
Common to choice feeders (750—1000 lb.)	5.00@ 6.50	5.50@ 7.65	5.50@ 7.50
Common to choice stocker steers	4.00@ 6.25	4.50@ 7.50	5.00@ 7.65
Common to choice stocker cows and heifers.	.....	3.50@ 6.15	4.00@ 6.00
Hogs—			
Top of Market	$ 9.95	$ 10.10	$ 10.00
Bulk of Sales	9.50@ 9.80	9.25@10.00	9.35@ 9.85
Heavy (250 lb. up)	8.50@ 9.50	9.25@ 9.90	9.35@ 9.80
Medium (200—250 lbs.)	9.00@ 9.75	9.50@10.00	9.45@ 9.90
Light (150—200 lb.)	9.50@ 9.95	9.35@10.10	9.60@10.00
Light lights (130—150 lbs.)	9.50@ 9.95	9.10@10.00	9.50@ 9.90
Smooth packing sows (250 lb. up)	8.00@ 8.50	8.25@ 9.00	8.50@ 9.25
Rough packing sows (200 lbs. up)	7.50@ 8.00	8.00@ 8.60	8.00@ 8.75
Medium to choice pigs (130 lb. down)	8.50@ 8.75	.....	.....
Stock pigs	.....	8.50@10.00	9.00@ 9.75

Lower Rates on Range Cattle.

The American Farm Bureau Federation has filed application with the Interstate Commerce Commission, asking for emergency rates on livestock to apply during spring movements from ranges to pasture.

Tomson Leaves Shorthorn Association.

Frank D. Tomson, for the past six years in charge of publicity for the American Shorthorn Breeders' association and editor of "Shorthorn in America," is leaving the association to give his whole time to his personal business. Mr. Tomson is well known in livestock circles through his association as a partner with the Tomson Brothers of Kansas, as well as through his writings and addresses during the fifteen years in which he has been identified with the agricultural press of the country.

Wallie Farm Dispersal Sale.

Wallin G. Foster, proprietor of the Wallie Farm, 4800 S. Pennsylvania street, Denver, Colo., is announcing a dispersal sale of his registered Holsteins. Mr. Foster has entered the automobile business in Denver, and expects to devote his entire time to the automobile business. The Wallie Farm is known throughout the entire Denver trade territory for the excellent quality of the animals that have been produced on this farm. Mr. Foster states that more A. R. O. cows will be put through the sale ring at his sale than were ever offered at public auction at any one sale in Colorado. He further states that more official records have been made in his herd in the past two years than in any herd in the west. Watch later issues of Western Farm Life for date and full particulars regarding this sale.

Hampshire Pigs for Club Members.

G. H. Frink, proprietor of the Lilac Lawn Ranch at Fort Lupton, Colo., is announcing a special discount to Pig Club members on all of his weanling Hampshire pigs. He has pigs to sell of either sex and prize-winning stock which register cholera-immuned, and ready for immediate shipment. See his announcement in this issue.

Co-Operative Marketing in Public Interest.

The future of co-operative marketing rests not only on the ability of the growers to handle their business problems, but also upon how well they meet the present pressing questions that lead to world-wide social and economic unrest. These obligations should be inherent in the legal right of producers to organize; they are responsibilities which no group of producers can avoid. No group of farmers should have the right to operate collectively if it uses the power of organization to restrict production artificially, to lessen or arbitrarily control the supply, to permit avoidable wastes, to speculate, to make profits that do not reflect the law of supply and demand, to create any situation through the power of organization that is discriminatory or unfair to the public or to a competitor, or to give a member, an officer or an employe any advantages that are not open to all alike. But it is in the public interest, and most vital to the restoration and stability of American agriculture, that co-operative marketing shall be encouraged and assisted by the Government and the public generally, and that the state and national Government shall recognize the right of farmers to organize in order to handle agriculture's inherent problems. The test of these organizations should be "What is their substance" rather than "What is their form." They must serve the public as well as their own members if they are to constitute effective agencies through which the complex problems of American agriculture are to be solved in the ultimate interests of the whole nation. —G. Harold Powell.

When you get into a tight place and everything goes against you, till it seems you could not hold on a minute longer, never give up then, for that's just the place and the time that the tide'll turn.—Harriet Beecher Stowe.

WALLIN G. FOSTER'S

Dispersal Sale of Registered Holsteins

MORE A. R. O. COWS THAN EVER WERE OFFERED IN ANY SALE IN THE WEST.

I have entered the automobile business and must sell out my entire herd about the middle of May. I have never been a dealer, but have confined myself to selecting real foundation cows for breeding purposes.

More official records have been made in my herd in the past two years than in any herd in the West. Only one cow in the herd over six years old. An opportunity to buy foundation cows never before offered in Colorado. Seldom anywhere.

Watch for Date and Details in Later Announcement

WALLIN G. FOSTER, 4800 S. Penn, Denver, Colo.

PRIZE WINNERS

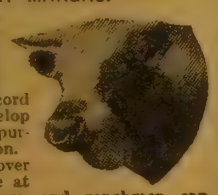
Shorthorns, Herefords, Guernseys, Holsteins, Jerseys, Poland Chinas, Duroc Jerseys, Including Grand Champion Poland China Boar.

Colorado Agricultural College, Ft. Collins, Colo.

MILKING SHORTHORNS.

Shorthorns That Milk

ARE MONEY MAKERS.



A herd that will give you a good monthly cash income is what you will need in the future. One of our young bulls from a Record of Merit cow can develop your herd into a dual-purpose paying proposition.

We know the war is over and have bulls for sale at prices that you farmers and ranchmen can afford to buy. Write for our bargain list and easy payment plan.

We also have several young bulls for sale, priced to sell.

THE PINE VALLEY DAIRY & FARMS CO.
Seeley G. Rose, Mgr. Colorado Springs, Colo.

Bates Shorthorns

are the foundation blood of true Milking Shorthorns. We have them. A few bulls for sale.

THE CARPENTER CATTLE CO.
GREELEY, COLORADO

Buy MILKING SHORTHORNS

from the oldest established herd in the state. We can supply your needs in bulls of beef type either horned or polled Shorthorns. Write Superintendent for folder on breeding and prices.

State Industrial School,
Golden, Colo.

MILKING SHORTHORNS

All Cows in Milk Officially Tested. Service bulls of World's Record breeding. Both males and females for sale. Personal inspection invited. Send for Illustrated Booklet.

THE BONVUE FARMS CO.,
Stockyards, Denver, Colo.

GREAT BARGAINS, 960 HEAD HEREFORDS, SHORTHORNS, ABERDEEN ANGUS 1, 2, 3, 4 and 5 years old. Cows, heifers and bulls. Prices $75 to $120 and up. 360 Percheron and Belgian horses, stallions, mares and colts, 1 to 6 years old. Prices $125 and up per head. One head or a carlot. Breeding guarantees with each. Registered pedigrees by mail. Stock on twenty farms in Iowa and Illinois. Write for circular and particulars. Address ILLINOIS HORSE & CATTLE CO., Good Block, Des Moines, Iowa.

Western Farm Life Gets the Business.

"That little ad got me just $127.50 worth of business, and I guess that's going some." —R. H. Jandebeur, Alma, Neb.

P. S.—I wish to say that your paper is the best business getter I have ever used. My little classified ads sure get the business. Thanks to Western Farm Life. A. H. J.

HOLSTEINS.

Only One Bull Left

Just one bull of serviceable age is left for sale in our herd. His dam made 15 pounds of butter as a yearling and will be tested for year's work this fall. She is a wonderful milker and the daughter of a 4-year-old with a year record of 25,208 pounds of milk and 878 pounds of butter, while the granddam of the bull's dam milked 108 pounds of milk in one day and 3,100 in 30 days. Two direct generations of 100 pound cows back of him. He is a good individual, mostly white, and sired by Denver Sir Segis, a 30-pound son of our senior herd sire, Johan Duchess De Kol Lad. What will this bull be worth to some good breeder?

Sanborn Meadows Holsteins.
MRS. R. G. DOUGLAS,
Rush P. O., Colo.

We have bred hundreds of prize-winning and high-producing Holstein cows, including

Tilly Alcartra

We can supply you with that same line of breeding. Write

McKAY BROS., Caddoa, Colo.

WALLIE FARM REGISTERED HOLSTEINS, 4800 S. Penn, Denver. W. G. Foster, Owner
Home of "Colorado Count," whose 29 sisters broke 140 world's records.

Bulls of Serviceable Age for Sale

Excellent individuals. World's record blood. Terms to responsible buyers. Wallie Farm bulls are guaranteed.

PRODUCTION TYPE SIZE **BREEDING**

We offer you a wonderful amount of these Holstein qualities—and from a clean herd. Bull calves from fine record dams. Pahgre Valley Ranch, Loesch Bros., Montrose, Colo.

Buy a Calf Out of This Herd

Twenty cows in this herd on an official seven-day test averaged 446.13 lbs. of milk and 20.19 lbs. of butter.

COLORADO STATE HOME,
2305 S. Wash. St. Denver, Colo.

D'ARCY HOLSTEINS

Have made good at home and they will do the same for you. A few choice calves can be purchased now at a price that can't help but make you money. Write

NORMAN R. D'ARCY
Parker, Colo.

A co-operative bull association will solve the problems of the high cost of a registered sire.

The Elbert County Shorthorn Breeders' Association

WILL HOLD THEIR FOURTH SEMI-ANNUAL SALE OF SHORTHORNS IN THEIR SALE PAVILION AT ELBERT, COLORADO.

Wednesday, April 26, 1922

25 Bulls——40 Head——15 Females

This is one of the best offerings that the association has made. Every animal had been passed on by a competent committee. The cattle business is rapidly coming back. The packers, farmers and feeders are demanding better cattle, and this is your opportunity to improve your herd.

DEWEY CARNAHAN, Secretary.
C. A. Melburn, President. A. G. CORNFORTH, Chairman Sale Com.
Auctioneers—COLS. ALBO[illegible] WATSON, and MARRIOTT.

HAMPSHIRE HOGS.

FOUR YEARS THE BEST

Meat Type Hampshires

The International Livestock Show is the test of hog producing power. Hampshires have won the grand championship in this test four years in succession—1918, 1919, 1920, 1921—in the hands of average farmers. No experts needed to make Hampshires win.

Hampshires are the greatest of all forage hogs, making the highest-priced pork out of the cheapest feeds on the farm. Active, vigorous and healthy, they raise exceptionally large litters. At the International they have shown, almost without exception, the heaviest spring pigs of any breed, carrying always the heavy, high killing, lean meat type. For free Hampshire information and for names of breeders in your neighborhood, address

Amer. Hampshire Swine Record Ass'n, E. C. Stone, Secy., Dep. 7, Peoria, Ill.

SHORTHORNS.

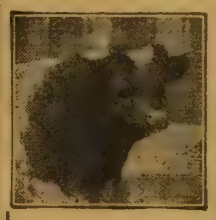
Sam Ball Shorthorns

Are the big hardy kind that make good under the most trying range conditions. At the head of the herd is

Big Sandy

From this herd came the sires of the grand champion carlot steers at the 1920, 1921 National Western. TWENTY BULLS, 2, 3 AND 4 YEARS OLD, THAT WE WILL SACRIFICE IF TAKEN AT ONCE.

SAMUEL BALL, WRAY, COLO.



Feed It

Millions of tons of forage will lose money to the growers this year unless fed to good livestock. Well-bred Shorthorn cattle will make a profit consuming the surplus forage and grain on any farm, and the farm will be the better, for the fertility will be increased.

AMERICAN SHORTHORN BREEDERS' ASS'N
13 Dexter Park Ave., Chicago, Ill.

SUNNYSIDE ROBERT

SHORTHORNS

We have for sale cows, and cows with calves by side, and heifers. Scotch and Scotch tops. A few choice bulls left. We make 'em make good. Write us.

GLEASON & BLAZER, Kiowa, Colo

SHORTHORN BULL FOR SALE.
ADVOCATES URR, roan, calved Sept., 1919. Bred by H. F. Harmon. Sire, Imp. Advocates Model 647679. Dam, Maid Marian 138615; sire, Gladstone 239313. Dam, Merry Maid 2d 29528; dam, Nonpareil Victor 2d 258255. Dam, Merry Maid 72d; sire, March Knight 188105. Dam, Imp. Winsome Maid; sire, Marchison 192330.
H. F. HARMON, BOULDER, COLO.

SHADELAND STOCK FARM
BREEDERS OF
SHORTHORN CATTLE

Herd headed by Maxwalton Rustler, a grandson of Avondale.

Chester White hogs of best breeding stock for sale. Also Ringlet Barred Rock eggs for hatching. G. W. BALL & SONS, Pierce, Colo.

GUERNSEYS.

GUERNSEYS

Sired by the Grand Champion bull at the 1921 National Western and State Fair, both male and female, are for sale. Write

H. D. PARKER
GREELEY, COLO.

WHEN WRITING LIVESTOCK ADVERTISERS PLEASE MENTION WESTERN FARM LIFE.
(Both Publisher and Advertiser Will Appreciate it.)

PUREBRED **Hampshires**

by Grand Champion sires and dams. Breeding stock for sale.

DeKalb's King 160th.
C. S. BRATT & SON, ARAPAHOE, NEB.

Weanling Hampshire Pigs

Delivery beginning May 20. Booking orders for pigs from our prize-winning blood lines. Either sex, registered, cholera-immuned, and ready to go, $35 to $25. Special discount to pig-club members.

LILAC LAWN RANCH,
G. H. Frink, Prop. FT. LUPTON, COLO.

POLAND CHINAS.

Mather's Big-Type Polands

sold to breeders in four states this year are giving satisfaction.

BUY WEANLING PIGS
at prices that will surprise you.

C. J. Mather, Longmont, Colo.

CHOICE BIG-TYPE
Poland China Pigs

Either sex, sired by F. B's Long Bob. ...WHITE LEGHORN EGGS, $2.00 per setting, $7.00 per 100.

F. B. MORGER, FOWLER, COLO.

SPRING BOARS

Just a few real herd headers left ready to go at pre-war prices. Used with grade sows even, they will more than pay for themselves on the first crop of pigs. Write today.

C. C. Boyd, Yuma, Colo.
Livestock Auctioneer and Duroc Breeder.

DUROCS.

DUROCS

Gilts bred to my champion boars and June pigs from my great yearling "Golden Chief" and a daughter of the World's Grand Champion, Great Orion Sensation, can be seen at the Stock Show.

J. W. Brauer,
22 Lorraine St., Colorado Springs, Colo.

HEREFORDS.

THE MARKET LOOKS PROMISING.
RESTOCK NOW WITH

HEREFORDS

Some choice heifer calves and a few bulls of Beau Santos and Bright Stanway breeding are for sale.

J. D. Craighead, La Junta, Colo.

D. S. Polled Herefords

Cows from Polled Plato, herd headed by POLLED SUCCESS A 3rd. Young bulls and heifers for sale.

Smith Livestock Co.
CHIVINGTON, COLO.

"THE Quality of stock offered by Western Farm Life advertisers is good, and the low prices make this an exceptionally good time to buy.—Write advertisers for prices and terms."
—Livestock Fieldman

Feeders Day at Fort Collins.

Bulletins giving the results of feeding experiments are often dry reading, but there will be plenty of life and interest for the feeder at the annual Feeders' Day meeting to be held at the Colorado Agricultural college in Fort Collins, April 28 and 29. There is no better way to realize the full value of the results obtained in the experimental feeding tests than to be on hand when the experiments close, see the animals and have all the details explained at the feed lots where they have been fed. In addition to studying the results of the experimental feeding the feeders and livestock farmers who attend will get to appreciate more fully what the experiment station means to them in their business at home.

At this year's meeting Professor E. J. Maynard, who has had charge of the animal investigations carried on by the experiment station, will have definite figures to show the relative value of the principal stock feeds of Colorado, including sunflower silage, for fattening cattle.

Six pens of cattle, uniform throughout at the start of the experiment last fall, have been carried through this winter on different feed combinations. The feeds used have been beet-top silage, pastured tops, wet beet-pulp, corn silage, sunflower silage, dried-molasses-beet-pulp, corn, barley, beet molasses, cottonseed cake and alfalfa. The cattle will be held in their respective pens for the inspection of visiting stockmen in order that they may actually see the results secured by feeding the different feeds and combinations. The cattle will be appraised by a packer buyer and a commission man from the Denver yards. Prominent speakers will discuss the problems of the feeding business and there will be ample opportunity for questions to be asked and answered. Three hundred and fifty feeders and livestock men from various sections of the state attended Feeders' Day program last year. Feeders and breeders can hardly afford to miss this meeting. The formal program will be on April 28.

Lambs were fattened last year, using the beet sugar by-products along with corn and alfalfa. It was found that dried molasses beet pulp when mixed with corn and fed with alfalfa made more economical gains than corn and alfalfa fed alone. Wet pulp also proved to be an ideal feed for fattening lambs when fed with corn and hay. Lamb feeding tests will be carried on each year to determine the many problems confronting the lamb feeders of Colorado.

There are thousands of acres of low lying state and public domain range lands in Colorado. At present these ranges are badly overgrazed. With no government protection, such as is found in the forest preserves, these lands have become almost totally unproductive.

The animal investigations section and botany section co-operating are carrying on a range management experiment in the foothills near the college. Early protection of the forage and a rotation of stock on pastures used are factors in the management systems. A comparison with range given no protection is made in this test.

How to Tan a Hide.

In response to many requests from farmers for explicit and dependable directions for tanning sole, harness, or belting leather, the Bureau of Chemistry of the United States Department of Agriculture has prepared a leaflet containing information for the treatment of a single cow, steer, or bull hide from the time it is taken from the animal until it is finished ready for one of these purposes. The equipment and methods have been modified from those that are in use where large numbers of hides are handled, but when the work is done with care as to materials and time for the various stages a good quality of leather may be produced from good, sound hides.

This leaflet on making leather on a small scale may be obtained free by addressing the Bureau of Chemistry, United States Department of Agriculture, Washington, D. C.

Rye Good Pasture Crop.

On two ten-acre pastures of rye used consecutively, Ralph Kimble of Elbert county, Colo., pastured twenty head of stock for 145 days last year. It required 200 acres of native sod to carry the same herd over a similar period.

This practice of planting fall rye in the spring for pasture purposes on non-irrigated lands has been quite successfully practiced by a number of eastern Colorado farmers. A report comes from G. W. Deming of Elbert county, who used Petgus rye on seven acres of newly broken sod in one corner of a 450-acre prairie pasture. Sixty-five head of cattle were pastured on this tract, the stock grazing over the rye every morning during the summer and fall. The season was very dry and when a field inspection was made in September the roots appeared as though dead. However, fall rains brought the rye out again and it went into the winter with a fairly good stand. Further data will be taken on this pasture during the present season.

The practice is to pasture heavily enough during the summer and fall to keep the rye from jointing; pasture again early the following spring, after which the stock can be taken off if a crop of grain is desired.

Seed treatment for potatoes will both increase the yield and improve the quality of the potatoes.

Homesteaders Organize.

Homesteaders of Wyoming recently organized and chartered the Wyoming Homesteaders' Protective Association and from its charter membership of about twenty it has increased in two months to a membership of nearly two hundred. The object and purpose of the association as set forth in the charter is to promote scientific farming, encourage education, advance civic pride, assist progress, and establish good fellowship among its members; to encourage homesteaders to fence and beautify their homes, foster stockraising, arouse interest in forage crops, stimulate interest in the construction of highways, and generally to improve the social life of the homesteader; to promote irrigation and encourage farm loan legislation, and in general to help, aid, and assist its members, and support any movement for the advancement of rural life in the state.

One of the minor matters which it is taking up is to oppose the continuance of the 500-foot stock trails without giving consideration to the local conditions. It is pointed out that in many sections the maintenance of these trails is inconsistent with present-day conditions.

Accredited Herds Increase.

More than two million cattle are now under the supervision of the Federal Department of Agriculture in the tuberculosis work being carried on in cooperation with the states. During the month of February 200,334 cattle were tested. The total number of fully accredited herds in the United States is 292,716. Three herds involving fourteen animals were tested in Colorado in February. There is still but one fully accredited herd in the state, but seventeen herds are under supervision and thirty-six herds are on the waiting list. The Federal inspector in charge is W. E. Howe, and the state official is Charles G. Lamb, State Veterinarian.

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WESTERN Farm Life

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Farm Prices Showing Most Speed in Return to Normal Conditions.

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Take Care of Farm Implements.

EDGAR W. COOLEY.

Lack of care of farm machinery is one of the greatest sources of loss on American farms. Every year the farmers of the United States spend millions of dollars for implements and, as a rule, these implements last only about half as long as they should because they are not kept under cover when not in use.

When implements are given rough usage by operators and are left outdoors, exposed to all kinds of weather, they can not be expected to do good work for more than five years. The life of thousands of machines is cut in two by neglect.

It is just as important to save farm machinery as it is to save the crops after we grow them. Often we almost work our heads off to get a hay crop under cover when a sudden storm threatens. Yet many of us allow our farm implements to stay out in all kinds of weather.

Poor care of machines means waste of labor, waste of money, and waste of crops. We cannot do good work with implements that are in poor condition.

Before putting any machine in the shed after it has been in use it is always best to apply a coating of grease to all polished parts. This will prevent rust. If the moldboard is kept bright, better work will be done by the plow and the energy of both man and horse will be conserved.

A good operator is quick to detect either by sight or by sound when any part of a machine needs attention. If the machine is not working smoothly in all its parts, the cause of the trouble should be immediately ascertained and remedied. A loose nut promptly tightened will not only save valuable time, but will prolong the usefulness of the implement.

All bearings should be kept oiled. In spite of care, bearings sometimes become hot. This trouble can be remedied by mixing graphite with the oil.

A little paint will do much to preserve both wood and metal. It also improves the appearance of a machine.

We should carefully go over every machine before it is needed in the field for the purpose of detecting every loose or missing nut or bolt, every worn or broken part. A list of all needed repairs should be made and these should be secured and put in place.

These things should not be put off until the implements are needed.

Electricity From Wind.

We have used electricity from a generator operated by wind power for nearly three years. It is geared to a 14-foot mill which has been pumping water from a 240-foot well into a reservoir for twenty years. The battery is a 180-ampere-hour and stores current enough for two weeks' use for light, washing and power to run a churn and cream separator. We also grind all the rye flour, graham and cornmeal that three families use, and our generator is only two-thirds the capacity of the kind now made and sold by the company. The cost is about the same as the gas engine plants. There is no operating expense, except wear on battery. The battery is guaranteed for five years. Seven days is the longest period without wind since we installed ours. With a 14-foot mill on the plains, by using two sets of batteries, enough current will be supplied to light, wash, iron, churn, separate, grind, and do the cooking for an average family.—H. B. Sprague, Phillips county, Colo.

Kerosene for Squeaky Brakes.

Chronic squeaking in the braking system is generally due to dirt that has been imbedded in the lining and is pressed against the drum when the brake is operated. Usually this dirt may be washed out with kerosene, but if it is so firmly intrenched that it refuses to come out with this treatment a little rosin mixed with castor oil and applied to the bands will cure the trouble.

Saving Cracked Windshield.

A crack in a windshield may be prevented from getting worse by drilling a hole at each end of the break with an ordinary twist drill. It will be necessary to keep the drill wet with turpentine while drilling, and it is a good plan to hold a block of wood behind the glass to give support.

Two birds to the acre appears to be the estimate for the United States, and the service of each bird worth 10 cents a day to the country.

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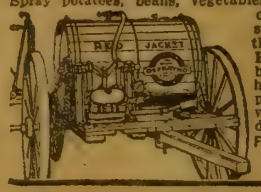

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Southwest Stock Show at Lamar Scores Success

CROWDS ENTHUSE OVER NUMBER AND QUALITY OF ANIMALS SHOWN

By George C. Wheeler.

THERE always has to be a first time in any enterprise. Farmers around Lamar and the business men of the town sensed in a general way that this community had made some progress in getting into dairy farming and had developed an interest in better stock of all kinds, but it took a livestock show such as was staged there April 14 and 15 to visualize just what had been accomplished. The Arkansas valley of Colorado has a lot of live-wire hustlers, both among the breeders and farmers and in the towns. This was evidenced as this new show gradually took form and passed through the stages of preparation and final completion.

Unfavorable Weather Opening Day.

It takes difficulties to show the material of which men are made. The men who backed this show are evidently men of vision, for they did not name this new event, the Lamar Livestock show, but the Southwest Stock Show. Following the heavy snow and wind storm of the forepart of the week came an all-night rain preceding the opening day of the show. "It hasn't rained here like this for six months," said one of the officials, "and much as we appreciate rain it did seem most untimely to have it pick our show date." Nothing daunted, however, everybody got busy and overcame the mud as best they could. Early in the morning of the opening day soft-handed business men of Lamar were on the show grounds, in old clothes and rubber boots, working at putting up tents, draining off water, and scattering cinders, which had been hauled by the big trucks of the milk condensery. There is nothing more dampening to enthusiasm than mud and rain on the opening day of a show or fair, but it took more than mud to put any crimp in the energy of the officials in charge of this stock show. By noon the results of the strenuous work began to appear and by Saturday, the real show day, no one would have thought things could have looked so discouraging Friday morning.

Lamar Community a Dairy Center.

Dairying and dairy cattle constituted the big interest of the show. This section is rapidly becoming a Holstein center. More than seventy animals representing ten exhibitors were entered. A number of exhibitors had but one animal each. L. Wirt Markham with eighteen animals had the largest exhibit. The Green Mountain Dairy, with twelve grade cows of unusual merit and productive capacity, came next in point of numbers. Model Dairy Farm of Holly had shipped up eight animals, all of them in good condition and well fitted for showing to the best advantage. This is one of the good herds of the valley. The American Beet Sugar Company's Center Farm herd showed seven animals, including a mature bull of exceptional quality and breeding type.

As the animals were being placed in their respective stalls it was an interesting sight to watch young men in leather "chaps" and cowboy hats wrestling dairy animals into their proper places. It shows how the attitude of the old-time cow man has changed toward the dairy business. The conversation about the dairy cow tent was of records, production tests, and methods of feeding for profitable milk production. Eight Jerseys were shown by five exhibitors.

Pearl Mooie Douglas 2d, shown at Southwest Stock Show by Harry Heath of Lamar. Second in aged cow class. High cow of state in cow testing associations for past two months.

At one end of the dairy cow tent was the exhibit of Max Grandy, cow tester for the Arkansas Valley Cow Testing association. This consisted of charts, sample rations for milk cows, records of the association cows, and an exhibit showing in a most striking manner how important it is to have individual production records on cows to know the profit they are making. At one end of this exhibit was tied the purebred cow from the American Beet Sugar company farm having the best record for 1921 among the purebred cows of the testing association, and at the other end a grade cow from the herd of Harry Heath of Lamar, with the year's record for grades. A purebred cow, Pearl Mooie Douglas from the Heath herd has held the state record in the cow testing associations for the months of February and March. Her production for March was 2,157 pounds of milk and 90.5 pounds of butterfat, and the profit over cost of feed $33.10. On another page of this issue is a full report of this association for March.

The dairy interest of this community centers largely around the cow testing association. Through Mr. Grandy's untiring efforts the feed costs for last year were cut to exactly half of what they were for 1919-20. The fourth annual report of this association shows that the profit over cost of feed has been greater in the year just passed than for any previous year. F. L. Reynolds was superintendent of the dairy section of the show and to his untiring efforts and the energy shown by Hays Williams of the beef cattle section, Clof Simpson of the hogs, C. B. Ray, horses, and Roy Cooper, with the good work done by Allyn Cole, secretary, and by citizens of the town and country around must be given credit for the splendid success of the event.

Raffled Off Holstein Calf.

Raffling of a Holstein calf sired by Colorado Rag Apple Korndyke, herd bull of the Sugar Company's Center farm, was a feature of the show. This calf had a pedigree tracing eight times to Pontiac Korndyke. Ladies of the town were selling the tickets on this calf. The proceeds were to go to helping pay the expenses of the show.

The beef cattle show was very light. Three Shorthorn bulls were shown and several Hereford bulls. Some fat cattle also were shown. Prizes of $70 were offered on these classes.

An exceptionally good showing was made in the horse division. The largest number were shown by B. T. McClave, all registered Percherons. David K. Wymer of Lamar had four grade mares of excellent draft type; George McWirt of Wiley showed a good draft team; Wm. Turpin of Lamar had a team of gray geldings that would attract attention anywhere. George Deiterly also had a good team of bay geldings. It made a most impressive ring when the six draft teams were out for the judge to place the awards. There was a ring of six stallions also. Only a few mules were shown and a few light horses and ponies.

Interest in Hogs Strong.

The reviving interest in hogs was shown by the strength of the hog show. Hogs go well with dairying, so it is to be expected that pork production will develop in a dairy section and that better bred hogs will be used. Duroc Jerseys were perhaps most prominent, although Poland Chinas were a close second. Even the Spotted Polands were represented with some good individuals. John M. C. Patterson and Sam Porterfield were the exhibitors of this breed. Among the Poland China exhibitors were D. C. Poole of Lamar, W. D. Clark of Lamar, Alfred Jones, Hartman; Z. M. Pinkham, Hartman, and Clof Simpson, Lamar.

Duroc Jerseys were shown by B. E. Sterret of Bristol; R. L. Stinnet, McClave, and A. F. Ogden of Graft, Baca county, who had just received two bred gilts from a sale in Oklahoma City and held them in Lamar for the stock show. A boy, D. L. Tobey from the La Junta high school, had two gilts. He is taking the agricultural vocational work provided for in the Smith-Hughes act and growing out these pigs as his home project. A bunch of fat hogs were shown by J. A. La Rose. There were six in the lot and they were exhibited with the self-feeder used in the home feed lots. This provided compartments for corn at one end and shorts and tankage at the other, with a hayrack for alfalfa between. Mr. La Rose purchased eighty-four of these Duroc Jersey shoats when they weighed 52 pounds a piece. The six shown weighed 243 pounds April 14, having made a total gain of 190 pounds in 110 days, an average daily gain to the hog of 1.72 pounds. He estimates that the whole lot averaged better than 225 pounds.

Avoca Lodge King Johanna, shown by Model Dairy Farm, Holly. First in class and grand champion. This bull stood first in class at 1922 Kansas National Livestock show, Wichita.

Town Turns Out to Show.

Unusual interest was taken in this show by the town folks. The tents and barns were brightly lighted and during the evening the space was crowded in all divisions. Friday evening a stock judging contest among high school teams was conducted. The boys judged rings of dairy cattle, beef cattle, hogs and horses. Five individuals constituted a team. They were given fifteen minutes to make their placings and gave oral reasons on each class later in the evening to H. L. Lascelles of the State Dairy Commissioner's office. Rocky Ford was high team with 1,422 points of a possible 2,000, winning the trophy cup put up by the show association; Las Animas was second, with 1,381 points, and Lamar third, with 1,236. The high man was Donald Crowe of Las Animas, with 325 points of a possible 400, winning the cup offered by Ed Applegate of Lamar, and Hugh Smith of Rocky Ford, second. The Rocky Ford high school had a team at the state contest in Fort Collins the same day and won there also.

Fitch Judges Dairy Cattle.

The prize list totaled more than $700, of which $455 was on dairy cattle. Dairy cattle awards were made by Prof. J. B. Fitch of the Kansas State Agricultural college, a widely known authority on dairying. The interest in this branch of livestock was evidenced by the crowds surrounding the ring while Professor Fitch was tieing the ribbons. First place in aged bulls went to the American Beet Sugar company's Center Farm. In the two-year-old class Model Dairy farm of Holly won on Avoca Lodge King Johanna, winner of first in class at the 1922 Kansas National Livestock show in Wichita. This bull also was later made grand champion. Turpin and De Witt won first in the yearling class and Model Dairy farm in the calf class.

Only two registered cows were shown, first going to Model Farm on Pioneer Oaks Korndyke Mantell, and second to the Harry Heath cow, Pearl Mooie Douglass 2d. The Model Dairy Farm cow also was grand champion female. On three-year-old cows Model Dairy Farm won first and L. Wirt Markham second. Center Farm took the blue in two-year-olds and Markham second. Model Dairy Farm won both first and second on yearling heifers and first in calf class.

The outstanding grade herd was that of the Green Mountain Dairy, owned by Hays Williams of Lamar. This herd took first in both aged cow and three-year-old classes. Turpin and DeWitt won the blue in yearlings and Coy Barnard in heifer calf class. Championship on grade females went to Green Mountain Dairy.

In purebred breeder's herd, Model Dairy Farm stood first and Center Farm sec- (Turn to Page 12)

In Abnormal Years Potatoes Need "Irrigating Up"

DRY-SEASON EXPERIENCES IN GETTING STANDS IN GREELEY DISTRICT

W. C. Edmundson,
Superintendent Colorado Potato Experiment Station.

IN years of normal winter precipitation there is sufficient moisture in the soil to germinate potato seed producing strong, sturdy plants, and as a rule, insure good growth until about the blooming stage.

It sometimes becomes necessary, however, owing to insufficient winter precipitation, followed by hot spring weather and drying winds, to "irrigate up" the crop. The term "irrigating up," when applied to potatoes, may be defined as the application of water to a moisture-deficient soil, after planting, for the particular purpose of supplying moisture to facilitate germination and meet the requirements of the plant until the normal period of irrigation.

It is not the purpose of this article to discuss the growing of potatoes under irrigation in normal seasons, but to treat of the methods that may be employed by the grower in his endeavor to cope with adverse conditions as they may occur during a dry season. Much can be learned from observing both the failures and the successful achievements of growers, and from experimental results, during a dry season, that may be of value in meeting similar seasonal conditions.

"Irrigate Up" in Dry Seasons.

According to the reports of the Colorado Agricultural college, the normal precipitation during the growing months of the year is about two-thirds of that for the entire year, months of the heaviest rainfall being April, May, June, July and August. The rainfall in the Greeley district for these months in 1918 was 9.83 inches. In 1920 it was 9.53 inches. In 1921 is was 10.58 inches, but for these same months in 1919 only 3.14 inches.

In some fields where 80 to 90 per cent of a stand was obtained in 1919, the yields ranged from one hundred and forty to one hundred and fifty sacks to the acre. In other fields where 40 to 50 per cent of a stand was estimated, the yields were only forty to fifty sacks to the acre. Many fields were abandoned early in the season because of poor germination.

Irrigating Before Planting.

When planting potatoes the grower is generally laboring under the opinion that there will be sufficient moisture to meet the crop requirements until the normal period for irrigation. For this reason irrigation usually will be delayed until after planting. If it is found that the ground does not contain sufficient moisture at the time the seed bed is being prepared to insure good germination, it should be irrigated before planting. Irrigation before planting insures a more even distribution of water and leaves the soil in a finer physical condition, if properly handled, than ground irrigated after planting, which frequently breaks up cloddy. As soon after irrigating as the soil becomes sufficiently dry to allow cultivation, the ground should be carefully worked to conserve the moisture.

In view of the fact that the quantity of moisture available for the crop cannot be determined early in the season, it is not likely that the land will be irrigated before planting. If the soil becomes dry soon after planting, and it is evident that "irrigating up" will be necessary to insure germination, it should not be delayed for it will be found that the young sprouts may be quickly injured in hot, dry soil. The first indication of such injury is manifested in wilting sprouts with yellowish-brown tips.

When seed of liberal size has been used and planting has been sufficiently deep, strong, sturdy sprouts will develop and maintain their vigor for some time, even though the soil be deficient in moisture, and will respond quickly when "irrigating up." If small seed has been used, however, or if the planting has been shallow, much of the seed will dry out, rot or produce weak plants, even though the proper quantity of water has been applied.

Method of Irrigating Important.

The method of irrigating up after planting is very important, and the grower must exercise the greatest of care if an even stand is to be obtained, that the potato or seed piece when planted will sprout without soil moisture, but roots will not form unless this moisture reaches the seed piece.

Many of the failures to get a good stand after "irrigating up," even though sufficient moisture is held in the soil, can be attributed to the fact that the moisture never reached a sufficient height in the row to be available to the young sprouts. The deep furrow which is used for later irrigation to supply water to the deep-feeding roots and to keep from saturating the ground around the tubers usually will be found to be too deep for conveying water when "irrigating up." If, on the other hand, a wide, shallow furrow is used little difficulty will be experienced in supplying water which will be available to the young shoots.

When cultivation has followed immediately after planting, with the shovels on the cultivator set to carry the soil toward the row, a wide, shallow furrow is made, which often will be found better than the deep furrow for irrigating up, especially for the short rows. The depth of the furrow used will depend entirely upon the length of the rows and the slope of the land, for if the land is almost level a larger head of water will be necessary to carry the stream through to the end of the row. With a shallow furrow a smaller head of water must be employed and the flow continued a greater length of time.

It is the custom of many growers to run water in every other row, but it is believed that better results can be obtained in "irrigating up" by running the water in every row, which insures a more even distribution of moisture. The length of time the water has to run will depend upon the length of the rows, the porosity of the soil, and the head of water used. The flow should not be stopped, however, until the soil in the row around the seed piece has become sufficiently moist. Care must be taken, however, not to flood land that is poorly drained.

Good seed important factor in getting stand. In this field seven rows on right from field-selected seed. Results of one year's work in selecting seed potatoes.

Use Good Seed.

The importance of using good seed properly planted cannot be over-estimated as a factor in getting adequate stands. Many growers attributed their irregular stands in 1919 to shallow planting and the use of small-sized seed pieces. The seed piece should be of sufficient size to support the young plant until it can absorb its nourishment from the soil. In dry soil the young rootlets are slow to form and the tender plants must depend upon the seed piece for a greater length of time than where the soil contains sufficient moisture to facilitate root growth. Whole seed does not dry out or rot as readily as cut seed, and if used will give the plant a better chance to become established in the soil. The importance of good seed, liberally used and properly planted, cannot be over-emphasized.

Conserving Soil Moisture.

In order to conserve soil moisture and increase the water-holding capacity of the soil, the ground for a potato crop should have been carefully and thoroughly prepared. On land where there is no danger of soil erosion during the winter it is generally advisable to plow in the fall, leaving the surface rough. This will help hold the snow and facilitate percolation of water into the subsoil. The upturned soil also will be broken up by freezing and thawing, thus improving its physical condition. A good practice in the preparation of alfalfa land for a potato crop is to crown the land in the fall. Crowning consists of plowing three to four inches deep. This is done to destroy the alfalfa crowns and if done thoughly very few plants will survive to cause trouble during the ensuing year. In the early spring the land should be cross-plowed to a depth of eight to ten inches. Spring plowing should be followed by harrowing every half day to break up the soil, prevent the formation of clods, and conserve soil moisture. After the land has been plowed and harrowed it should be worked down and thoroughly pulverized with a disk harrow.

When land has been prepared some time before planting it is advisable to harrow at frequent intervals in order to maintain a surface mulch which will break the capillary attraction and conserve moisture. Just before planting the land should be floated to reduce all ridges or high spots and fill in the low places that may occur through the field. Careful leveling will greatly facilitate "irrigating up" and subsequent irrigations, for it is almost impossible to obtain an even distribution of water where the land is not properly leveled.

Where alfalfa land is crowned in the fall and fall irrigation can be successfully carried on it is recommended, as it will facilitate crowning. This is particularly true if the land is dry. Where water is applied in the fall it has more time to penetrate into the soil and consequently goes to a greater depth.

Club Boy Makes Good Profit

PRODUCES PIGS CAPABLE OF WINNING AT BIG STOCK SHOWS.

Dora Cate Crabtree.

A PROFIT of $1,355 for the year 1921 was made by Alfred Stronk, a 13-year-old member of the Swine Club of Twin Falls county, Idaho. This record places him first among club members in dollars and cents profit in one of the foremost counties in club work in the United States.

Alfred purchased Pathfinder's Queen Third, a purebred Duroc sow, from W. H. Rambo, November 15, 1920. He gave $200 cash and his personal note for $175 due November 15, 1921. At that time the sow was a junior gilt and bred to Orion Joe. Royal blood flowed in her veins, Great Pathfinder being her sire and Mabel Colonel her dam.

She received the best of care at the hands of her young owner. She was fed on ground barley, a small amount of corn, together with plenty of good pasture. On March 5, 1921, she farrowed twelve pigs, four sows and eight boars. One of the sows died the next day, but she raised the other eleven.

Fed Pigs in Creep.

When the pigs were a few days old a feeding trough was fixed for the little ones, where the sow could not get to it. Here the litter received a little ground barley, some skim milk, and mineral foods. They had access to good clover and alfalfa pasture.

On May 7 weights of three sows and three boars were taken. The boars weighed 47, 38 and 41 pounds, respectively; the sows, 45, 47 and 45 pounds. On September 1 the same three boars weighed 166, 164 and 174 pounds, and the sows 200, 196 and 200. The gain in the fifteen weeks between the two weighings ran uniformly for the boars 125, 126 and 127 pounds, and for the sows 151, 153 and 155 pounds.

The dam, three gilts and five boars were taken to the county fair on September 13 where they won $170 in cash. This included all the first places in the classes in which they were entered against the breeders of southern Idaho, and the firsts and seconds in the club department.

Prize Winners at Fairs.

To the state fair the eight pigs were taken. In club work they took two firsts, one second, and two thirds, amounting to $45 in money. In open competition they received two thirds, two fourths, one seventh and one eighth, bringing in money $68.

The dam and eight prize winning pigs at the previous fairs were exhibited at the Western Royal Livestock show in Spokane, Wash., on October 22, in competition with the breeders of the United States and the club boys of the Northwest. Here they won $110 in cash prizes. From here they were taken to the Pacific International Livestock show at Portland, Ore. Here they won all the top places in club work and the dam took fifth place in open competition. The prize offerings here were small and his total winnings were only $37. For the four fairs his total prize money was $437.

Keeps Sows for Breeding.

Alfred has sold the eight boars, but is keeping the three gilts and Pathfinder's Queen Third. The cost of feeding and caring for the sow and litter for the year was $155. After placing a fair value on the stock he is keeping and deducting all expenses his account shows a profit of $1,355.

This young Duroc breeder is well pleased with the work and is already making his plans for a still more successful year in the swine club in 1922. Queen, bred back to Orion Joe, farrowed March 5 with eleven more pigs to her credit. Two of the gilts were bred to the junior champion boar at the Idaho State fair and the Western Royal to farrow later in the spring.

Potato Acreage Increased.

At least 4,000 more acres will be planted to potatoes in Colorado this year than last, according to April 1 estimates of the Federal-State crop reporting service. This is a 4 per cent increase over last year, and would mean a planting of 110,000 acres this year as compared to last year's planting of 106,000 acres. If the same ratio of increase holds in both irrigated and non-irrigated sections there will be 85,000 acres planted on irrigated land and 25,000 on non-irrigated lands.

Temper your enthusiasm and you have what the world calls earnestness. Earnestness is the exercise of all good faculties. There is no substitute for this thoroughgoing, tremendously important word—earnestness.—Van Amburgh.

Intermountain Livestock Show Makes New Record

ANNUAL EXHIBITION DEMONSTRATES IMPROVED BREEDING AND FEEDING

Walter Olin,
Agricultural Commissioner, D. & R. G. W. Railroad.

NEARLY four thousand head of livestock of the various classes were shown at the Fifth Annual Inter-Mountain Stock Show held at the stock yards of North Salt Lake, April 3 to April 6, inclusive. This big show which was held under the direction of the livestock committee of the Salt Lake Chamber of Commerce scored another real success and has established itself as one of the big shows of the mountain states. Dr. R. N. Mead, manager of the show, and Joe H. Mandersfield, superintendent of the Union Stock Yards, deserve a large share of credit for the satisfactory manner in which the exhibition was conducted.

It was originally planned five years ago to make this purely an educational stock show and so there are no entrance fees and no admission charge.

The fat and feeder cattle, hogs and lambs exhibited this year showed improvement in both breeding and feeding over previous shows, which fulfills the purpose of the show. The quality of Holstein, Jersey and Guernsey dairy cattle also was indeed a pleasant surprise to everybody.

Great Show of Herefords.

Hereford exhibits were exceptionally strong. Grand championship honors on bull went to H. Ganderault & Sons of Brady, Neb. Their 2,200-pound grand champion is an example of good blood and shows the result of wise and systematic breeding. This herd was established ten years ago.

The grand championship on females went to J. H. Crozier & Sons of Wells, Nev., on an outstanding Hereford cow of good blood lines.

Winterton Brothers of Charleston, Utah, took a number of firsts and seconds on the young bulls and heifers they exhibited. These men have induced their neighbors to get into Herefords and this district is becoming known as the Herefordshire of Utah. Some good sales were made at the show by the Wintertons.

Shorthorn honors were divided between Uncle John Seeley's sons from Mount Pleasant, Utah, with their Mount Dell Shorthorns, and the Varin Ranch of Victor, Idaho. Seeleys took a whole bevy of ribbons, including the ones for grand champion bull and grand champion female. The Varlin Ranch won the senior championship on bulls with their white herd bull.

Strong Breeding Hog Show.

In Duroc Jersey hog classes the Richards Livestock company of Virginia, Idaho, took both herd and group prizes. Earl G. Lloyd, Murray, Utah, took many individual first and second prizes in the Duroc Jersey classes.

In Berkshire classes the Ashlane Farms of Pleasant Grove, Utah, made some remarkable winnings.

In the Poland China classes it was "nip and tuck" between Edward Erickson of Venice, in Sevier Valley, Utah, and A. W. Pulley & Sons, of American Fork, for individual honors. Both are doing mighty good work and merit and should have support and encouragement. No one seeking good Poland China blood need go outside of Utah to get it. These men can supply it.

Fat Stock Makes Record.

The record sale of fat stock was made for all fat stock shows in Utah, Wednesday, April 5. In less than three hours, twenty-five carloads of cattle, thirty-one carloads of hogs, and five carloads of fat lambs were sold. All of these brought prices above that prevailing in any other livestock market in the United States for that day. In the two days of auction and private sales more than $3,000,000 worth of livestock changed hands.

A fine 1,380-pound steer, shown by Clayton & Murnan of Eaton, Colo., that had won grand championship honors—a solid red Shorthorn—sold for 19½ cents a pound. The grand champion carload of fat steers, shown by S. D. Ralston, Cozad, Neb., brought $11.70 a hundred. No carloads of steers sold for less than $7.10 a hundred.

The prices fat lambs brought were astonishingly good. Buyers were present from Los Angeles, Ogden, Salt Lake and other points, and they each wanted the few carloads offered. A fine lot of Hampshires bred and shown by Austin Brothers of Salt Lake, that had won grand championship honors, were captured by Wilson & Company for the Los Angeles market, but this firm had to pay $16 a hundred to get them. All lambs sold from $13.75 to $15.50 a hundred.

In the fat hog classes the bidding was keen. The most spirited competition developed when the grand champion carload of smooth, well finished Poland Chinas, shown by Ed Todenhoft of North Platte, Neb., were up. Cudahy Packing Company of Salt Lake got the load for $12 a hundred. This same North Platte breeder had a prize-winning load of Duroc Jerseys and also a load of Hampshires, each winning first in its classes. One sold for $11.60 and the other for $11.50 a hundred.

Tracy Colom and Ernest McClellan each had three loads of hogs from Wayne county, Utah. Mr. Colom had over his pen: "Hauled for ninety miles over well-nigh impassable roads to railroad station." These hogs brought from $11.25 to $11.50 a hundred. All the carloads of hogs brought from $11 to $12 a hundred.

Fat Wether by Airplane.

A nice fat wether arrived at the show by airplane, sent by the Commercial Club of Elko, Nev. The plane covered the distance between the two cities in two hours, approximately 260 miles. This wether sold in the ring for $12.25 a hundred.

This show was up-to-date in every respect; it even had its Mutt and Jeff. These were two six-year-old grade steers. Mutt was a tall, somewhat leggy 1,780-pound roan. Jeff was a short, thick-legged 810-pound deep red steer. He evidently was stunted in calfhood and never got over it. Prizes were offered for the person who could guess the weight of each. Mike Farrington of Wilson & Company of Los Angeles guessed almost the exact weight of each, while thousands of men, women and children registered estimates.

The exhibit of pigs and lambs fed and fitted by members of boys' and girls' clubs were interesting features in the auction sales. These animals brought good prices, for everyone felt that this work should be encouraged. Getting farm youths interested in the farm livestock, through ownership, is one sure way of awakening an interest in the farm itself.

Banquet to Visiting Stockmen.

Secretary J. H. Rayburn and the livestock committee of the Salt Lake Commercial Club, gave a stockmen's night at the clubroom during the show. Visiting stockmen and exhibitors met Salt Lake business men, ate dinner together and got acquainted.

Addresses were made by Governor Mabey of Utah, President Schramm of the club, W. W. Armstrong of the Copper National Bank, Dr. R. N, Mead, David A. Smith, chairman livestock committee of the club; J. H. Manderfield and M. R. Murphy, general manager of Cudahy Packing Company, with headquarters at Omaha.

Banker Armstrong made a strong appeal for the organization of stockmen for the betterment of their own interests. Mr. Murphy urged stockmen and farmers to grow more hogs. He declared climatic conditions are ideal for the hog industry in the most of this intermountain country. Yet he declared that the most of the hogs for their Salt Lake plant have to be procured in the plains states east of the Rockies. Everybody had a good time and were given food for thought as well as bodily nourishment.

Both Dr. Mead and Superintendent J. H. Manderfield of the Salt Lake Stock Yards affirmed that the fifth inter-mountain livestock show was the largest exhibition of its kind ever held in the state. Already plans are under way for a bigger and a better one in 1923.

Market Outlook for Farm and Ranch Products

FARM PRICES SHOWING MOST SPEED IN RETURN TO NORMAL CONDITIONS

Edited by Glenn G. Hayes.

ALTHOUGH farm prices led the tumble down hill when deflation started, they are showing most speed on the return. They were so much below other groups when the turning point was reached, however, that, with few exceptions, they are still in the rear.

According to the index numbers of wholesole prices for March, issued by the Bureau of Labor Statistics, farm products in that month were slightly higher than in March, 1921, while all other groups of commodities were lower this year than they were a year ago. This advantage to the farmer is partly offset by a decline of 8 per cent in prices in the "foods" group, which includes many farm products such as butter, eggs, potatoes and apples, which are sold to the consumer without an intervening process of manufacture: The biggest declines in other groups occurred in fuel and lighting, metals and metal products, and house furnishing goods. The following table gives the actual index numbers, using the 1913 level as 100:

	Mar. 1922.	Mar. 1921.	Feb. 1922.
Farm products	128	125	126
Food, etc.	138	150	138
Cloths and clothing	182	192	183
Fuel and lighting	183	207	183
Metals and metal products	114	139	115
Building materials	202	208	202
Chemicals and drugs	159	171	159
House furnishing goods	213	275	213
Miscellaneous	153	167	150
All commodities	152	162	151

Compared with February, 1922, March prices were slightly higher, while the foods group was unchanged. Most of the others showed little or no change and the general average for all commodities was only .6 per cent higher than in February.

There is still a marked lack of adjustment among the group index numbers. On the one hand are metals and metal products, 14 per cent, and farm products, 28 per cent higher than in 1913, and on the other hand are house furnishing goods 113 per cent, and building materials 102 per cent higher than in the last pre-war year. Such a lack of balance is an obstacle to business progress and a lot of it must be eliminated before real prosperity will arrive.

Rental for Money Reduced.

A significant event in the commercial world last week was the evidence of lower rates for money. Treasury certificates in the amount of $150,000,000 were issued bearing only 3½ per cent interest. In spite of the low rate more than twice the amount issued was subscribed for. This is the lowest rate since September, 1917, and compares with 6 per cent on an issue late in 1920 when money was tightest.

There are other signs that borrowers are to have easier times. Country banks in some sections are reported to be trying to place their surplus funds instead of being themselves borrowers from the banks in large cities. Apparently local debts are being liquidated. The demand for money to finance spring operations in both city and country has caused no strain and War Finance Corporation offices in various states report that applications for funds are falling off. The East is again developing an appetite for good farm mortgages and the farm loan market is returning. Industrial concerns which have had to obtain new funds from bonds are now finding it possible to sell new issues of stock, both common and preferred.

Finally, in spite of the demand for money abroad, the Bank of England has reduced its re-discount rate to 4 per cent.

With cheaper money, Liberty bonds have become more attractive. All issues sold at new high levels last week and a level above par is expected for all of them before long. These issues were at their lowest point about fifteen months ago, since which time they have advanced 5 to 16 per cent.

Cheap money is one of the signs of a return to business expansion, of prosperity, so that these events have an importance much greater than the extent to which they reduce the cost of money to the individual borrower.

Trend of Cattle Supply.

Since the course of prices upon the rank and file of cattle depends more upon the supply from week to week than changes in the demand, the following table which shows an eight-year average of receipts by weeks at seven leading markets is highly significant in its bearing on the future of the market:

Week ending—	Receipts.	Week ending—	Receipts.
April 1	154,000	July 1	152,000
April 8	142,000	July 8	144,000
April 15	147,500	July 15	149,000
April 22	151,000	July 22	179,000
April 29	158,000	July 29	182,000
May 6	147,000	Aug. 5	183,000
May 13	148,000	Aug. 12	176,000
May 20	142,000	Aug. 19	192,000
May 27	150,900	Aug. 26	216,000
June 3	141,000	Sept. 2	237,000
June 10	144,000	Sept. 9	224,000
June 17	147,000	Sept. 16	249,000
June 24	164,000	Sept. 23	289,000

This table shows that relatively light runs are the usual order during May and June, but beginning about the middle of July the runs increase rapidly, reaching maximum about the middle of October.

The actual supply of beef, however, does not increase as much as these figures indicate. Cattle arriving in late summer and fall average lighter in weight than those arriving in the first half of the year. Also shipments of stocker and feeder cattle, which must be deducted from the total receipts, reach largest volume in the fall months.

The market invariably becomes a two-sided affair during the late summer when grain-fed cattle advance in prices while grassers, which compose the bulk of receipts, are apt to decline.

The outlook for the beef cattle market during the next sixty days shows but little change. Light receipts were offset for a time by a decline in the appetite for beef due partly to religious holidays, but this influence is past and a stronger undertone is manifest. Exporters have filled some good sized orders at Chicago, which have helped that market.

The seasonal scarcity of cows and heifers usually continues until along in June. Cutters and canners have been selling well except the "dairymaids," which show evidence of disease and probable condemnation. These are severely discriminated against.

The veal market continues slumpy with prices the lowest in more than a decade. Receipts have been unusually large for over six weeks, with more than the usual grist of undesirable light "bob" or "deacon" veals selling at prices from $5 per hundred pounds down. This movement should begin to subside within an- (Turn to Page 12)

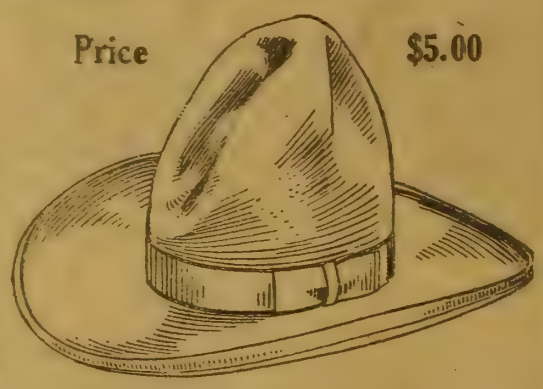
The Denver Dry Goods Co.

Stockmens' Supplies

at Department Store Prices

Powder River Hat Price $5.00

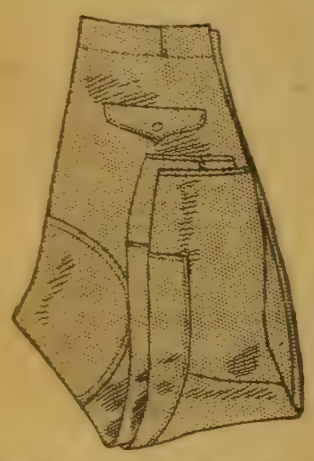
Back to 1914 Prices



No. S4-100—Our Feature Hat. The Powder River has a 7½-inch tapering crown and a 4-inch rolled brim. Trimmed with a broad band, and binding on brim exactly as shown in illustration. Crown is silk lined. This hat is a beautiful beaver color.
Price $5.00

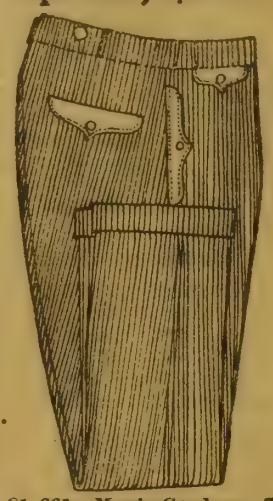
Send for Our Complete Stockmen's Catalog

Moleskin Special, $3.75



No. S1-5053—Drab Moleskin Riding Breeches. Double seat; shaped laced bottoms; tunnel belt loops; built-in-knee space; stitched eyelets; two hip pockets, flaps buttoning the legs; two side top pockets, and a watch pocket. Splendidly tailored.
Special $3.75

Leather Trimmed Special, $6.50



No. S1-661—Men's Corduroy Trousers. Made of good quality narrow wale Corduroy, welt seams, two side pockets reinforced with leather flap, with button, 2 hip pockets with leather flap and patent clasp, 2 watch pockets with leather flap with patent clasp, cuff bottoms, tunnel loops, extra well tailored.
Special $6.50

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TIRES look much alike. It's the things you can't see that count—fine fabrics, Up-River Para and Plantation Rubbers, careful building by skillful workmen.

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Non-Irrigated Land Pastures.

The need of better meadows and pastures for non-irrigated land is expressed by Roy M. Mullen, a Boulder county farmer, in a letter to Western Farm Life. He puts up the problem to E. R. Parsons, our expert on farming practices for regions of limited rainfall. "Corn, cane, Sudan, and all of the root crops do well here, but have you had any experience with the perennial grasses for meadow and pasture," says Mr. Mullen. "We have fair native grass—black and white grammas—for late pasture, but do you think that some of the tame grasses would help us any? Also, what varieties for hay and what cultural methods are best in starting such grasses as meadow fescue, bromus, tall meadow oat grass, orchard grass, and Johnson grass? Also the types of soils, or rather, the grasses best adapted to the different types of soil and at different altitudes on non-irrigated land. We have a sandy loam of great depth and are about 6,500 feet above sea level."

It is difficult and probably impossible to find any grass that can be used for a permanent pasture better than our native varieties," says Mr. Parsons in discussing the question raised. "Evolution teaches that in order to survive a plant must adapt itself to conditions. Our native grasses have done this by growing shorter and smaller than the eastern varieties in order to meet the deficiencies in moisture. Therefore, any more luxuriant grass introduced from a country of greater precipitation must naturally adapt itself in the same manner or perish. Thus we find that permanent natural pastures any better than the native grasses cannot very well be created, but with the help of cultural methods, we can establish temporary artificial pastures which will last for a while until the effects of the plowing and other cultural methods have worn out.

"The most permanent of these pastures is alfalfa, but the stand must be well established before pasturing, and it should not be grazed until late in the season. Brome grass makes a fine pasture in some places and may last for years, but does not do well everywhere. It is worth trying. Sweet clover makes a good pasture for about two years. Fall rye may be planted in the spring for summer pasture, and also in August for late pasture, and may sometimes be kept going for two or three years, if the seasons are not too dry. When using any of these crops for pasture purposes, it must be remembered that they should not be eaten off too close. Some growth must be allowed between times and the stock should be removed in wet weather, or the surface will pack as hard as a rock, which destroys the plants."

If in need of advice, ask Western Farm Life Service Bureau.

Farmers' Service Bureau

Questions regarding any branch of farming, livestock production, animal diseases, legal matters pertaining to the farm, cheerfully and promptly answered by letter and through the magazine. Address Service Bureau, WESTERN FARM LIFE, Denver, Colo.

Cannot Force Money Back.

Can I force a brokerage firm to take back 200 shares of stock in a concern which I purchased from them, and refund my money?—A. V. D. Z., Weld county, Colo.

You cannot force your money back, unless there is fraud in the case. You might send the stock in and we would try to see what it could be sold for, either to the company or to an outsider. But you cannot demand your money back as a matter of right.—Hamlet J. Barry, Equitable Bldg., Denver.

Can File an Enlargement.

If A owns a ditch, can B file an enlargement and can A charge for clearing the right of way through timber where the right of way is only cleared for the present ditch?—C. F. S., Jackson county, Colo.

B can file an enlargement, but he will have to pay all costs of whatsoever kind due to filing upon and making of the enlargement.—A. Lincoln Fellows, Senior Irrigation Engineer.

Liable for Whole Debt.

A takes a mortgage from B on some oats and allows him more on the oats than can be realized from them at the present time. Can A force B to make up the difference if he sells the oats on foreclosure? Can B force A to take the oats on the face value of the note?—E. B., Rio Blanco county, Colo.

B is liable for the deficiency. He cannot force A to take the oats at the face value of the note.—Hamlet J. Barry, Equitable Bldg., Denver.

Mortgage Still Good.

If a man takes a chattel mortgage and neglects to have it recorded until the giver mortgages the same articles to another party, does his mortgage hold as a second mortgage if recorded? How long is a mortgage good in Colorado?—G. E. B., Fremont county, Colo.

Yes, the mortgage is good as a second. A mortgage is always good between the original parties to it. But if it becomes the property of another, the right to possession must be asserted within thirty days of its expiration.—Hamlet J. Barry, Equitable Bldg., Denver.

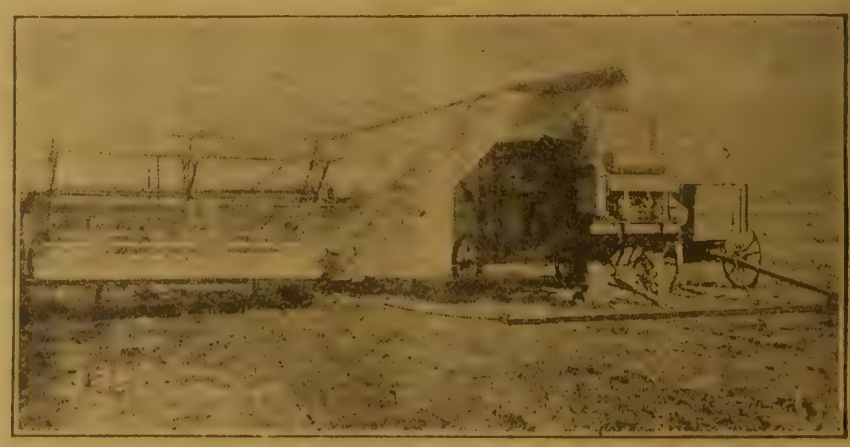
Horse May Have Azotouria.

A young mare about four years old became stiff and her eyes would draw back. She eats and drinks. Her flesh seems hard and smooth like bone.—Z. L. R., Weld county, Colo.

Your description of the disease is too brief for a correct understanding of the nature of the disease. Your statement that the mare became stiff and her flesh almost as hard as a bone, indicates azotouria.

Azotouria is a specific non-infectious

A New Type of Header-Thresher



AN entirely new type of threshing machine designed to operate in connection with the ordinary header, has been placed on the market by one of the leading manufacturers of farm machinery. By placing this thresher in the position of the header barge and having a wagon receive the threshed grain, the grain is headed, threshed and cleaned at one operation. This machine, which is shown in the cut, is expected to meet the conditions in the hard wheat sections of the Middle West. It is pointed out that when wheat is ripening unevenly the grower may start the harvest with the header and barge putting the grain into stacks to be threshed later, and at any time when conditions for threshing are right the thresher can take the place of the barge and the whole operation be completed as the grain is headed.

It is claimed that this new header-thresher can be used as an independent thresher by the addition of a straw carrier and grain threshed from stacks without extra help. It also can be used to thresh grain sorghums from the shock. The machine can be drawn by horses or a tractor and it will handle the grain from a twelve or fourteen-foot swath, according to the claims made. A motor mounted on the front of the separator supplies the power for operation.

disease of horses and is caused by heavy feeding and lack of exercise. It is sometimes spoken of as "Monday morning disease," because it is liable to come on Monday morning, after the horse has rested over Sunday, on full feed. After a period of rest on full feed, the horse is hitched for work; soon he begins to sweat excessively, gets stiff in his hind quarters, and trembles. A little later, in bad cases, the urine will become the color of black coffee, the eyeballs appear yellow, the muscles over the hips become very hard and the animal is paralyzed in his hind quarters.

More than half of these cases are fatal. The treatment consists in stimulating the elimination of the azotized products of the kidneys, skin, digestive tract, and lungs. The disease may be easily prevented by reducing the ration of concentrates when the horse is idle. When a horse that has been worked regularly on full feed is rested for even a day, the ration must be reduced, and it will be safer to turn him in a yard where he can get some exercise.—G. H. G.

Mare Has "Moon-Blindness."

A five-year-old mare has developed sore eyes. For about a month first one eye and then the other waters until it trickles down her face. She holds the eye shut nearly all the time. They seem milky. Otherwise she is all right and is fat. Her eyelids when raised are fiery red on the inside. Is there anything I can do for her?—W. T. H., Sedgwick county, Colo.

The horse apparently has either simple ophthalmia, or periodic ophthalmia, which is commonly known as "moon-blindness." For the latter there is no remedy known to the veterinary profession. Periodic ophthalmia appears with one or both eyes inflamed, and after a week or two the symptoms will abate, only to appear again later. This will continue until the horse is totally blind.

Simple ophthalmia is caused by foreign bodies getting under the lids, by injuries, etc. This would not appear to be a case of infectious sore eyes, nor associated with infectious diseases like influenza. The fact that both eyes are affected, and first one and then the other inflamed, makes it look very suspicious of periodic ophthalmia. However, it will be well to bathe the eyes several times a day with 3 per cent solution of boracic acid.—G. H. G.

Will Wheat Make Crop.

A thirty-acre field of wheat sowed September 1 sprouted last fall, but did not come through the ground until this spring. It is a good stand and is now stooling. The soil has never wanted for moisture and there is plenty of moisture now. Will this wheat make a crop if the moisture conditions continue favorable? Does it hurt spring wheat to pasture it? —J. R. J., Prowers county, Colo.

Since your wheat sprouted last fall there is no reason why it should not come on and make a crop, providing conditions are favorable from now on. There have been some differences of opinion as to what to expect of winter wheat which does not come up in the fall, but the fact that wheat sprouts in the fall or early winter or even before freezes are over is generally considered evidence that it will joint and head in a normal manner the following season. Under some conditions it might not injure spring wheat to pasture it, but my advice would be to keep stock off it if you expect the best results from the crop.—G. C. W.

War on Prairie Dogs.

"It costs $1 to feed him; one-half cent will kill him. Let's kill him."

This murderous slogan applies only to prairie dogs, so there is no cause for alarm—except in the prairie dog towns of Arapahoe county, where great havoc is being wrought by poisoned oats scattered around the burrows by a busy crew working under the direction of S. J. Hanks, deputy pest inspector.

Mention was made in these columns some time ago of the fact that Arapahoe county had decided on a war of extermination against prairie dogs. This job was selected as the one big task of County Agent Tedmon for 1922. The county commissioners declared they would back the county agent to the limit in any plan that would prove effective in ridding the county of a pest that is keeping thousands of acres of land in non-productive condition. Pest districts were organized to the number of twelve, each an entire township in extent. Cooperating with the county in the work is the office of state entomologist at Fort Collins and the U. S. Biological Survey.

After organization of the districts the proper legal notices were issued to resident and non-resident land owners. All are given opportunity to do their own work, under proper inspection. Those failing to comply have the work done for them by the county, and charged up to the land, collectible in cash or as taxes, at the rate of 10 cents an acre. In the notices sent out dates of final inspection are given. The work must be completed by the time specified.

Up to May 1, five tons of poisoned oats had been distributed in the twelve infested townships and reports indicated that the harvest of death among the rodents was great. They are dying by hundreds, and when the campaign is finished it will mark the finish of prairie dogs in Arapahoe county. Co-operation with adjoining counties along the borders is being worked out, in the effort to prevent reinfestation.

County Agent Tedmon, who has been officially appointed pest inspector, sent out a preliminary letter to all landowners, outlining the plan and stating that landowners will be expected to do their own work; that the formula used is that of the U. S. Biological Survey, and that the board of county commissioners has set aside a revolving fund to be used in defraying expenses of distribution of poison and inspection.

"On our letter head," states this letter, "is a picture of a husky specimen with a hungry look in his eye. Two hundred like him will eat as much grass as a cow. Just a few families like him will make an awful hole in a hay, grain or corn field. He costs us thousands of dollars every year. We don't like to have him around. Our motto for this work is 'Let's kill him.'"

Judge Flor Ashbaugh, county attorney, furnished the inspiration for the campaign when he said: "If Mr. Tedmon is to be the pied piper of Hamelin we must all work with him." So far Arapahoe county's pied piper has succeeded in luring only the rodents, and it isn't likely that he will have to pipe for the children, for the farmers are all turning in and helping to rid the county of the prairie dog pest.—A. T. S.

More Wheat This Year.

Colorado will produce 17,160,000 bushels of winter wheat this year, according to the estimates of the U. S. Bureau of Markets and Crop Estimates in co-operation with the Colorado State Bureau of Immigration, or nearly two million bushels more than last year. This is based on conditions as reported for April 1. The percentage of abandonment cannot be reported as yet, but it has been estimated at 10 per cent, the average. On this basis there will be 1,320,000 acres to harvest, of which 92 per cent is on non-irrigated lands. April conditions were 77 per cent of normal, according to the estimates, which gives a probable yield of 13 bushels to the acre. Conditions improved during the month of March. Wheat was sown last fall under unfavorable conditions, particularly in the northeast section of the state. In 1921 the non-irrigated sections produced a little more than 80 per cent of the state's total wheat production.

The forecast for the United States, based on April 1 conditions, is 572,974,000 bushels, compared with 587,032,000 last year and 578,575,000 the average for five years. The national crop April 1 is given a condition of 78.4 per cent of normal, as compared with an average April 1 condition for ten years of 84.3, and a condition of 91.0 per cent April 1, 1921.

Moisture Conditions Encouraging.

Moisture in the soil on April 1 is given by the Federal-State crop reporting service as 84 per cent of normal, as compared with 87 per cent a year ago, and 86.5 per cent two years ago, on same dates. Conditions have very materially improved since the April statistics were compiled and now probably are better than last year. The deficiency at the present time is principally in the northeastern counties of the state.

The seasonable flow of waters from snows on the high mountain areas, as reported by the U. S. Weather Bureau, will be about normal in the Rio Grande basin, below normal in the South Platte, considerably below normal in the Arkansas, and above normal in the Gunnison, Yampa, and White, and much above normal in the San Juan and Dolores, and probably in the North Platte. For the Colorado the flow will be above normal, with a large early flow if high temperatures continue in the middle drainage area.

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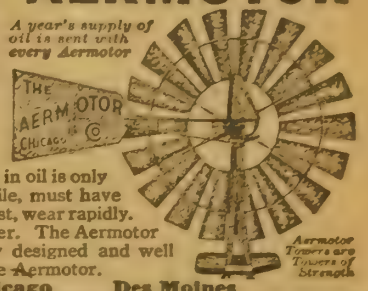

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Cost to Produce Crops.

What is the cost of producing the various farm crops is a question constantly coming to the mind of the thinking farmer. The various operations of the farm are too complicated for accurate records made and the farmer does not have the time to do actual cost accounting work himself as a general rule, although some farmers do.

Accurate cost accounting is to be done in Colorado the coming year in a triangular area included between Greeley, Eaton and Windsor. A group of twenty-five farmers in this area will co-operate in doing this cost accounting work, which will be under the direction of the office of farm management and farm economics of the United States Department of Agriculture working through Professor L. A. Moorhouse of the department of economics and sociology at Colorado Agricultural college.

A route man will visit each of the farms two or three times a month to check up on figures and records. This work has been done in a number of other states and the results are now becoming available for the guidance of farmers operating under similar conditions. In several typical areas in Kansas cost accounting work of this kind has been done for a number of years and a valuable lot of information is being accumulated. The work will bring together definite information on the labor costs of different farm operations and other expenses of crop and livestock farming and the returns obtained from the various sources. The figures are to cover a series of years and by making comparisons of the returns from the respective farms for several years in succession it will be possible to draw some conclusions as to relative profits of the different lines. In this area where the work is under way is included general livestock farms, beet raising, potato growing, dairy farming, and truck farming.

We believe this is a valuable piece of work and well worth watching. The business end of farming has lagged behind the production end. Every farmer realizes that, and we are trying to give the marketing and business features of farming more attention. Every farm organization is working toward that end.

Boys' and Girls' Club Work.

Colorado stood third last year in completed club work of its boys and girls. That is a good record, considering that it covers the whole country and many of the states have been doing this kind of work for a much longer time than Colorado. The figures show that 80.6 per cent of the boys' and girls' club projects were completed. This high percentage is a measure of the quality and faithfulness of the leadership. This record was 13.8 per cent above the average. New Mexico stood first, with 87.2 per cent completed, and Nevada second, with 87 per cent.

These figures show that these western states are [illegible]g their share in developing character and in[illegible]ative among the boys and girls of the rural dis[illegible]. Colorado had 7 per cent of the boys and girls of the rural districts enrolled in club work of some kind last year, as against 2 per cent for the whole country. From our experience in studying the results of work of this kind with boys and girls, we do not hesitate to urge that it be given the highest measure of support. Why not make next year's figures show even better results for these western states? One Colorado community already has set the pace for this year. Around Hanover in the southeastern part of El Paso county, it is claimed that every youngster between the ages of ten and eighteen years is enrolled in at least one club, and some are members of two. J. C. Hale, county agent, deserves a good deal of credit for this 100 per cent enrollment in club work.

Anti-Vivisection Act Dangerous.

An endless amount of human suffering has been relieved and thousands of dollars saved to farmers and stockmen through research work involving experiments with lower animals. Some group of persons with more soft sentimentalism in their make-up than sound sense and actual knowledge is now trying to obtain the necessary signatures to place on the ballot as an initiated measure an anti-vivisection bill.

Farmers should know that this bill would stop all experimenting with lower animals, and perhaps even prevent the branding, dehorning, and vaccinating of cattle. Practically all of our knowledge of infectious diseases, both in man and in animals, has come from experimenting with lower animals, points out I. E. Newsom of Colorado Agricultural college. Production of the various vaccines and serums all would be made impossible with this law in force. We have plenty of laws protecting animals from real cruelty. Uninformed persons might vote for such a measure from purely humanitarian grounds without realizing that the ultimate effect would be to increase suffering instead of reducing it.

We would urge readers to give this anti-vivisection propaganda careful consideration before signing any petitions.

Valuable New Mexico Bulletin.

A most valuable bulletin on farming in regions of light rainfall in New Mexico has just been published by the Agricultural experiment station of that state. Owing to the dry winter and spring seasons small grains, either fall or spring sown, are not successfully raised, it is pointed out. The most important crops are dwarf and early varieties of milo, kafir and feterita. Cultural methods are discussed including the matter of soil blowing. Five years ago a bulletin was published on the same subject and this brings all the work up to the present date. We would advise our readers living in the plains farming areas of New Mexico to write to the experiment station at State College, New Mexico, for a copy of this bulletin. It is number 130.

Making Progress on the Up-Grade.

Steadily but surely agriculture and business generally is making progress on the up-grade. Increased values for all classes of agricultural products are increasing confidence and cheering up farmers all over the country, although not arousing the enthusiasm which these increases would have created if they had come before the wheat, corn and livestock had gone to market.

The War Finance Corporation, which is in a good position to feel the business pulse of the country, and particularly in the agricultural industry, report that financial conditions have greatly improved as a result both of improved markets and better arrangements for financing agricultural and livestock operations.

Colorado to date has received $8,000,000 for agricultural and livestock loans from the War Finance Corporation. This is new capital brought into the state for financing agriculture and livestock farming for the three years ahead. Up to March 31 the War Finance Corporation had approved loans for agricultural purposes in the whole country of $272,575,577.12, and more than fifty million for export.

National Grange to Kansas.

The National Grange meeting for 1922 will be held in Wichita, Kan., the week of November 15. The last national meeting was in Portland, Ore., at which time it was voted to go to Kansas for 1922. Topeka and Manhattan also were active candidates for the meeting, but the decision of the executive committee, after giving due consideration to the various applicants, favored Wichita. The secretary of the Wichita chamber of commerce hastened to Portland to present the Wichita invitation as soon as the message came by wire that the big Grange convention was to come to Kansas. Colorado Grangers should look forward to sending a large delegation to this year's National Grange meeting.

Why Remove Reclamation Offices?

Farmers of the mountain states are vitally concerned with the administration of the reclamation service. Federal reclamation projects involving large expenditures of funds are located in these states. The fartherest east of any project is one small one in Nebraska. When first begun the administration of reclamation work was from Washington, but the offices were moved to Denver to be near the center of the territory where the projects were located. Now comes an order from Washington for the removal of these offices, back to Washington. The farmers to whom these projects eventually go are interested in having them turned over at a minimum cost. Every item of unnecessary expense means that they will be loaded with a bigger burden when the projects are taken over.

The only answer given as to the reason for the removal is that it is in the interest of economy. If that is true farmers in reclamation project districts should have no objection to having the work done where it can be done with the greatest economy. But is it reasonable to accept that as the real reason? To begin with, it will cost the government $15,000 to move the employes to Washington. Thousands of dollars of additional railroad transportation will be required annually for the frequent trips which reclamation officials will have to make to the projects. Equipment and supplies will be delayed and in many ways the work will be handicapped.

In view of the probable increased funds to be expended in reclamation work it is all the more desirable to have it administered from a central point. And do we not have in these probable increased funds the proverbial Ethiopian in the wood pile which is back of the desire to have the purchases handled back East? Eastern business firms are hungry for orders and are not nearly so much concerned with the economy of administering the reclamation work as they are in getting the business of furnishing supplies needed.

A storm of protests are going to Washington against this proposed move. Probably farmers in the reclamation districts, many of them readers of Western Farm Life, have not given the matter consideration as yet, but you should demand that economy of administration be the guiding principle in handling this work. You have a right to be heard and if you wish to express yourselves do it through communications to your Senators and Representatives in Congress.

Larger Supplies of Truck Crops.

In the Rocky Ford district it is reported that the cantaloupe acreage will be double that of last year. An over-production is feared by growers and firms with whom contracts have been made. An effort is being made to shift some of the acreage in that district. This is a condition which easily can arise with a highly perishable crop. The government estimate just out forecasts a cantaloupe acreage of 44,480 in the early producing states, in comparison with 34,860 last year. An increase of more than 100 per cent is the forecast for the early potato acreage of Florida and Texas. An increase in the Bermuda onion crop is also forecast. Last year onions were very profitable on the Western Slope and as usual there is the tendency to increase on the line which was profitable in the season just passed. Sometimes a good rule to follow is to do the opposite of what the crowd is rushing into. Jumping from one thing to another always, getting in on the rising prices and getting out on the slumps is poor business in almost any line of farm production.

Sunflowers Good Silage Crop.

In high altitudes and locations where none of the standard silage crops can be grown, Russian sunflowers are worthy of consideration for silage. Sunflowers may be sown considerably earlier than corn. Light frosts after they are up do not injure them. In Russia where this crop is extensively grown they sometimes even plant them in the fall in order to have them start as early as possible in the spring.

Sunflowers grow so rapidly, however, that when planted late they make a better growth than corn and a larger silage yield. The results from feeding sunflower silage have been favorable and the tonnage is far ahead of corn. One of the tests made at the Colorado experiment station the past season has been on the feeding value of Sunflower silage. The value of the crop for silage purposes under the conditions indicated has been sufficiently established so that we have no hesitancy in advising our readers to give sunflowers consideration as a silage crop. Perhaps you have not put up a silo because the ordinary silage crops could not be grown. Here is a crop that can be utilized successfully as a silage crop and will grow under high altitude conditions.

From the Nation's Capital

FARMERS ARE PUTTING UP SUCCESSFUL FIGHT FOR JUST CONSIDERATION ON TARIFF MATTERS.

E. E. Reynolds.

THE new Senate tariff bill provides a schedule of duties which, it is promised by the Finance Committee, "will afford protection to American industries and permit them to pay wages sufficient to enable our workmen to maintain an American standard of living."

The American valuation plan, contained in the House bill, was eliminated, and the duties levied on foreign valuations. Chairman Fordney of the House Ways and Means commitee, declares, however, that "it will be American valuation, or Congress will remain in Washington until snow flies." He also declares that he will never agree to Congress adjourning until after the tariff bill has been passed.

The agricultural interests have been given a larger degree of protection than ever before. Commenting upon the bill, President Milo D. Campbell of the National Milk Producers' Federation, says: "Dairymen have cause to be pretty well satisfied with the bill reported to the Senate. It gives them adequate protection against Canada, Denmark and Holland." Senator Gooding of Idaho, says: "It is the first all-American tariff bill, because for the first time the farmer is getting his full measure of protection, the same as the manufacturer. The farmer is getting 99 per cent of all the duties he asked for." Congressman Dickinson of Iowa, leader of the House farm bloc, declares that "for the first time in history the farmer is getting his just dues. This is because he has organized, and made a good showing here at Washington. The farmer figured out what he wanted, then he fought for it."

The wool schedule provides for a complete revision of the wool tariff based on a duty of 33 cents per pound, scoured basis. In fixing the duty per pound on the clean scoured content, the committee says: "This method will more properly protect the wool growers than would be the case if the duty were levied on the weight of the unwashed wool. The compensatory duties on manufactures of wool are in proper proportion to the wool used to produce the quantity contained in the manufactured product."

The duty of 2 cents on green and 4 cents a pound on dried hides is accompanied by high compensatory duties on all sorts of leather goods. Cattle are protected by a rate of 1½ to 2 cents a pound; sheep and goats, $2 a piece; sheep and goat meat, 2½ cents a pound, and fresh lamb, 5 cents a pound.

The sugar schedule written into the bill provides for a basic rate of $2 per 100 pounds, subject to the 20 per cent preferential, or $1.60 net to Cuba. There is much dissatisfaction among domestic sugar producers in regard to the tariff on sugar, and an attempt will be made to amend the bill so as to provide a higher rate on Cuban sugar.

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Senate Passes Agricultural Appropriation Bill.—The agricultural appropriation bill passed the Senate carrying $37,250,000, an increase of $1,500,000 over the bill as it passed the House. The $360,000 free seed distribution item got through by a narrow margin of one vote, but as it is the same as that passed by the House it is safe for the coming year. While this so-called seed "graft" is annually opposed by the agricultural papers many thousands of persons write in for these seeds, giving congressmen and senators the impression that there is a real demand for the seeds among the farmers.

An increase of $500,000 was made for agricultural extension work through the county agents. The fund for eradication of the barberry bush was increased from $200,000 to $500,000, and an addition of $75,000 was made to the appropriation for fighting the white pine blister, raising the fund to $250,000.

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A Bill That Provides for Federal Inspection.—Hearings on the bill to establish uniform standards of classification and inspection service for farm products, introduced by Representative Summers of Washington, have been in progress. The principal feature of this bill is a provision for Federal inspection at the point of shipment. It would undoubtedly necessitate the employment of a government inspector at every fruit packing house and local shipping station to certify to the quality and condition of each package of fruits and vegetables, before shipment begins. Fees are to be collected from the shippers to pay for this inspection.

The bill is being promoted by Pacific Coast shippers who claim that carloads of fruit and vegetables consigned to eastern markets are condemned upon arrival at destination by city inspectors and destroyed, causing heavy losses to the growers and shippers.

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Farm "Bloc" to Give More Substantial Aid.—The groups of senators and congressmen now known as the "farm bloc" have already done effective work in securing legislation favorable to the farming interests, but they are now entering upon a legislative program which promises to give much more substantial aid to the farmers. Representative L. J. Dickinson, in reply to a Boston paper, summarizes the purpose of the House agricultural bloc in the following brief platform:

"Stabilize food production, economize transportation, minimize market machinery, liberalize commodity financing, equalize export demands, harmonize the different sections of the country accordingly, and we will have taken a step forward in the interests of John Doe, an ordinary citizen."

::::

Bill to Free Farm Organizations From Prosecution.—By a vote of 102 to 66 the House passed an amendment to the State and Justice departments appropriation bill, which frees farm and labor organizations from prosecution in case their activities should lead to charges of price-fixing. This amendment refuses the use of Federal funds for prosecutions of labor unions or farmers' co-operative associations under the anti-trust laws.

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Introduces Bill to Create Crop Insurance System.—Representative Sinclair of North Dakota has introduced a bill in the House providing for the appointment of a joint commission to investigate the expediency of creating a government crop insurance system.

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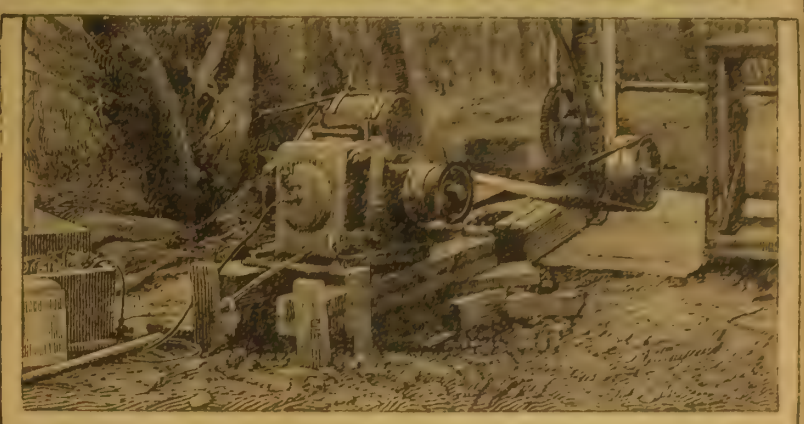
Agriculture Shows Steady Improvement.—The Federal Reserve Bulletin for April says: "Agriculturally the month has been one of favorable development considering the season. Winter wheat prospects are reported good in most parts of the country. Cotton planting indicates increased acreage. Prospects for deciduous fruits are reported encouraging. Labor conditions in the agricultural regions are regarded as satisfactory."

The Department of Agriculture reports that farm labor conditions are approaching normal and the average of prices for the things farmers buy have decreased upwards of 20 per cent since February 15, 1921. The department says the decline in prices for things farmers buy is most pronounced in the case of machinery and tools.

Farming Can't Compete.

"The American farmer is a modern of the moderns in the use of labor-saving machinery, and has made vast strides in recent years in scientific tillage and efficient farm management, but as a business in competition with other businesses agriculture is a one-horse shay in competition with a high-powered automobile."—Barnard Baruch in the Atlantic Monthly.

SURE POWER—AND GOODYEAR BELTS



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GOODYEAR

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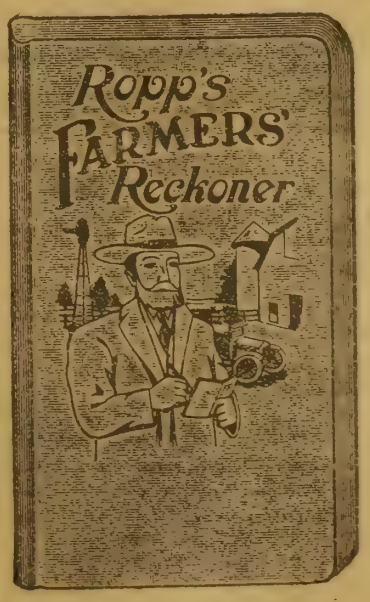

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It Saves You Time!

It shows at a glance the number of bushels of any grain in quantities up to a carload; the amount of hay in the stack; the cash value at a wide range of prices of all grains, by the bushel or weight; the value of cattle, hogs and produce at a wide variation in prices; the amount of butterfat in milk; wages on the basis of working days; the number of square feet of lumber in any size stick and the number of pieces in a thousand feet; the capacity of cisterns, tanks, boilers and containers; the standard weight of all grains and seeds per bushel; capacity of wagon beds, granaries, corn cribs, round and square; the fodder capacity of silos and the number of cattle they will feed for six months; interests on various amounts at different rates of interest. More than seventy points of law clearly defined.

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Don't take our word for it, we invite you to do as many others are doing, TRY THEM OUT with any other breed on earth. No matter what fowl you are now breeding, TRY S. C. ANCONAS BESIDES THEM and be convinced just as we were a few years ago that S. C. ANCONA is the BIGGEST LITTLE MONEY MAKER of the age.

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JUST WON AT THE NATIONAL WESTERN—First cock, first hen, first, second and third cockerels, and first and second pullets. No pens entered.

Our strain is bred for EGGS by the only reliable method—the TRAP NEST.

BABY CHICKS AND HATCHING EGGS in any quantity, at PRE-WAR PRICES. We can sell you QUALITY chicks, as low as most hatcheries sell chicks from bought-up market eggs of unknown quality. Book orders at once, and avoid being disappointed.

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The Rural Household

Questions about home problems promptly answered by letter and through the magazine. Letters from women containing helpful suggestions for improvement of rural life are always welcome. Address all communications to Mary G. Collopy, Editor Home Department, Western Farm Life, Denver, Colo.

Great men and little have the same accidents, the same temptations, the same passions; but one is on the felloe of the wheel and the other near the axle, and so less agitated by the same revolution.—Pascal.

My Neighbor's Story.

It was at Tom Watson's sale that the women folks began the discussion about moving to town "to get a little pleasure out of life."

"All we get is a bite to eat and a rag to wear, wherever we are," began Mrs. Jenkins.

"I can stand the lonesomeness of it, but my boys and girls are tired of it," continued Mrs. Thompson.

Just then, quiet little Mrs. Leach told her story:

"Asa and I have lived here in Prairie View community ever since we were married. Our oldest boy, Jim, is 22 years old, as you know, and the twins, Paul and Henry, are 20. I've always regretted that my boys had no sisters to help them find entertainment in our own midst, so I have tried my best to make up for that need. With my egg money and cream check, I have bought books, magazines, records for our phonograph. My sons have always understood that they did not have to sneak away from our home for a dance; they knew that I did not consider our floors too precious for an orderly little neighborhood dance. But better than all this I found were—girls! My boys are strong, healthy, normal boys. They have seen the beauty of an enduring love in our own happy home. They look forward to their new homes. So, I invite girls to my house; I encourage my sons to bring their girl friends home with them whenever they wish. My boys discuss their girls with me very frankly, because we have never made it a matter of teasing. When the girls come to the house they are made to feel that they are there, not on exhibition or trial, but as friends, or pals, of my sons and their mother. It has worked out so nicely that I hardly think Jim or the twins will suggest moving to town."

Making Old Floors New.

Housecleaning time always brings us the problems of walls and floors. Everything within the room can be removed and cleaned, leaving us still the walls and floors that need "freshening up." The following suggestions contained in Farmers' Bulletin 1219 have been considered worthwhile by many women:

Porous woods, such as oak and ash, take a smoother and more durable finish if a good paste filler is rubbed into them before the varnish, wax, or shellac is applied. Maple, pine, and other nonporous woods do not need such treatment and in fact will not absorb some kinds of fillers.

The best paste fillers are made of silex (silica), linseed oil, turpentine, japan, and coloring matter to match the wood. Cornstarch and whiting are also used as the base of paste fillers, but are less transparent than silex and can not be worked into the pores of the wood so thoroughly. They are generally used in home-made fillers, however, for silex is difficult to obtain in the retail trade. Oil has a tendency to darken wood, so it is sometimes omitted from the filler if a very light finish is desired.

A filler should be about the consistency of varnish when applied. If too thick, it can be thinned with turpentine for use on natural-colored woods, or with boiled linseed oil on stained woods. After the floor has been dusted, the filler is generously applied lengthwise of the grain with a clean stiff brush. This coating is allowed to set for fifteen or twenty minutes, or until it turns gray, and is then rubbed in with cotton waste or burlap crosswise, not lengthwise, of the grain. A coarser material will drag the filler out of the pores instead of forcing it in. Several days later the floor is rubbed smooth with No. 0 sandpaper slightly dampened on the back. Ordinary oak will take up about five pounds of filler to 250 square feet of floor. If a very high polish is desired, a second coat of filler containing less oil and more turpentine may be applied and rubbed down as in the first case.

Liquid fillers are sometimes used on close-grained woods to fill up the pores and prevent the absorption of the more expensive varnish. A pure shellac varnish made by dissolving gum shellac in alcohol is recommended by some authorities for this purpose The ready-mixed liquid fillers, which are brushed on and permitted to remain on the surface without being rubbed off, are in many cases little better than cheap varnishes.

Our Fashion Service.

All patterns 12 cents each. Address Western Farm Life, Pattern Department, 1518 Court Place, Denver, Colo.

Read This Before Ordering: Patterns ordered through this magazine are mailed promptly from the factory at Brooklyn, N. Y., and arrive in 10 to 12 days from time order reaches Western Farm Life. Be sure to specify size and number of patterns. Write your name and postoffice address plainly to avoid delay. These patterns are handled at cost, as a service to our women readers. The price of 12 cents includes postage.

3973—A Charming Style. Loose panels, long shoulders, a pretty sleeve effect, and straight lines, these are outstanding features of this attractive model. It will develop well in the new crepe weaves or in linen, or gingham tissues. For remodeling or combining two different materials it is also desirable. The pattern is cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. To make as illustrated requires 3⅜ yards of figured material 38 inches wide, and 2⅜ yards of plain material 40 inches wide. The width at the foot is about 2 yards.

3965—A Frock for Many Occasions. Here is a simple, youthful design—a one-piece model, with draped panels that may be omitted. The dress is in "slip

on" style. It lends itself well to the new crepe weaves, as well as to handkerchief linen, taffeta and gingham. Plain and figured foulard will be nice for this. The pattern is cut in three sizes: 16, 18 and 20 years. An 18-year size requires 7⅞ yards of 36-inch material. The width at the foot is about 2 yards.

3436—Boys' Blouse and Knickerbocker Trousers. Pattern 3436 furnishes these two practical styles. It is cut in five sizes: 6, 8, 10, 12 and 14 years. A 10-year size will require 1⅞ yard of 36-inch material for the blouse and 1⅜ yard for the Knickerbockers. Serge, cheviot, corduroy and khaki are good for the Knickerbockers, and cambric, madras, linen, chambrey and flannel for the Blouse.

3959—A Dainty "Party" or "Best" Frock. Canton crepe or crepe de chine would be attractive for this style, but it is nice also for gingham and other cotton weaves. The skirt is joined to a long waisted underbody. The overblouse, caught up at the sides in soft folds under ribbon trimming or a motif or rosette, is slipped over the dress when worn. One may have both skirt and overblouse in straight or scalloped outline. This pattern is cut in four sizes: 6, 8, 10 and 12 years. A 10-year size requires 2¾ yards of 40-inch material.

SAMPLE FREE **1000 AGENTS Wanted to Sell SELF HEATING IRONS**

Pay salary or commission. Men and women easily make $10.00 to $15.00 per day. Sell at sight. Burns 10 hours for 2 cents. Every lady a prospective buyer. Money Back Guarantee. Write today for particulars.

IMPERIAL SAD IRON CO. Dept. 17 Ft. Worth, Texas

Profitable Farm Poultry

W. E. VAPLON.

Questions about the farm flock promptly answered by letter. Free advice on all phases of poultry production. Address all inquiries to Poultry Department, Western Farm Life, Denver, Colorado.

It never pays to overcrowd the coops and brooder or colony houses. Both fowls and young chicks need plenty of room day and night. To crowd a hundred in where there is room for but fifty is to invite sickness and loss. A coop big enough for a brood when they are small is not large enough when they get older. Provision should be made for larger quarters or the brood must be divided.

Head lice on the chicks is one of the drawbacks from now on. There are many remedies on the market, but a little lard about the size of a pea rubbed thoroughly on the back of the head is sufficient to rid the chick of the pest. After dark, on a dry, warm night, is a good time to apply the lard. Previously the coop or brooder should have been thoroughly treated for lice. Successful chick raising means an everlasting fight against lice.

Feeding Month-Old Chicks.

When chicks are a month old a growing mash may be substituted for the starting mash, says O. C. Ufford of the Colorado Agricultural college. This mash consists of a mixture of 40 pounds of cornmeal, 15 pounds of bran, 15 pounds of shorts, 10 pounds of ground barley or ground oats, 15 pounds of meat meal, and 5 pounds of bone meal. The whole wheat and the coarser cracked corn can be used instead of the scratch mixture of fine cracked corn and cracked wheat.

The growing mash should be kept before young pullets at all times until they are ready for the laying house. Three to four pounds of feed are required for the production of one pound of gain, live weight.

The young cockerels should be separated from the pullets, when they weigh from one and a half to two pounds, and those not needed for breeding stock should be fattened and marketed. Early hatched cockerels, marketed early in the season, are usually a better paying proposition than when they are kept until four or five pounds and sold on a lower market. The young pullet should be given every opportunity to develop, as she needs a vigorous body of strong constitution and vitality for heavy egg production. She will not have it if she is stunted in any manner.

Feather-pulling Hens.

My chickens seem to loose the feathers from their necks every spring. Thinking it might be lice, we dipped all and used lice powder, but it didn't seem to do any good. We feed them bran and chop mash mixed with milk in the morning, and potato peelings and scraps at noon and corn at night. I have noticed some of the chickens pick feathers out of the others.—K. D., Wyoming.

The fact that you have noticed feather-pulling by some of your hens would lead me to believe that your fowls are forming the habit. I would suggest a heavy meat ration or plenty of milk, and that you isolate those having bare necks and those being picked on. Idleness may cause a picking at one another, then the taste of blood on the end of the feather starts the habit. Keep the hens busy hunting for food, furnish either meat in some form, or milk in abundance, or both, and the habit will soon be forgotten.—W. E. V.

What is Hogan System?

What is meant by the term Hoganized chickens?—Mrs. H. E. F., Montana.

A Mr. Hogan of California has devised a system of body measurements to be applied to a hen to determine her laying capacity; for instance, the greater or less space between the pelvic bones and between the pelvic bones and the end of the breast bone. Mr. Hogan's book can be purchased of the Northwest Poultry Journal, Salem, Ore.

Fake Poultry Cullers.

Fake poultry cullers are swindling farmers in western Kansas and are working towards the Colorado line. This warning comes from county agents in Kansas counties. The county agent in Jewell county, Kansas, says the fakers go to a farmer and offer to cull his flock for 1 cent a bird, providing he will sell them the culls at the market price. If the farmer agrees, the fakers, who seem to know poultry culling practices, make it a point to take the best layers and leave the culls.

One woman in that county has lost eighty of her best hens as a result of the swindle and the hens she has left are not laying. One of her neighbors, more observant, saw the fakers pick his best layers and put them into the cull crate, so he stopped the game. Farmers are advised to consult their county agent or the poultry department of the Agricultural college and receive a free bulletin describing approved methods of culling.

Success With Brooder Stove.

We have always kept a few chickens, but last year I built a brooder house and cooling room, each compartment 16x16 and in the brooder room I have a 1,500-chick capacity oil-burning brooder. I use crude oil, which I bought from the Utah Oil Refining company for 12 cents a gallon. I used 110 gallons.

I bought 1,200 day-old baby chicks. I sold about 600 friers by calling up the most well-to-do residents over the telephone every Friday, dressed the fries and delivered Saturday morning. I received 30 to 35 cents a pound for them. I saw I was going to have success with my chickens, so I built an open-front hen house 51x24 feet, and also used my brooder and cooling room for laying hens. My first pullets started to lay when eighteen weeks old. I got my baby chicks March 30, 1921. The last week in September they were laying enough eggs to pay for all their feed. The month of October I made $75 over their feed. In November I made $125 over their feed, and in December I made $125 over their feed. Early in February we were getting 45 cents a dozen, or $13.50 a case.—John H. Sampson, Utah.

Charcoal broken as fine as grains of corn is good for both old and young fowls.

Ask Western Farm Life Service Bureau. Information free on all phases of farming.

Mineralized Water Routes Chicken Lice

Tablets Dropped Into Drinking Founts Banish Vermin, Make Fowls Grow Faster and Increase Egg Yield.

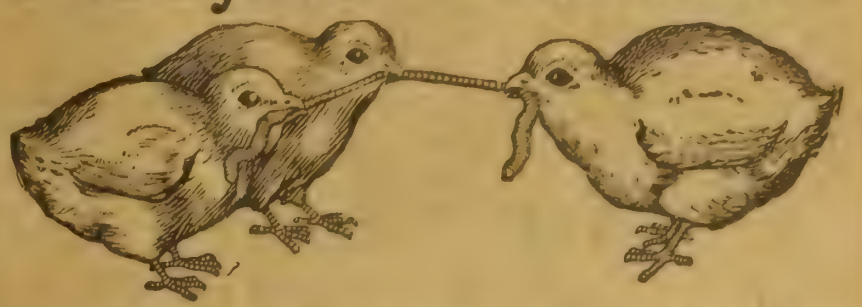
Any poultry raiser can easily rid his flock of lice and mites, make chickens grow faster and increase their egg yield by simply adding minerals to the fowls' drinking water. This does away with all bother, such as dusting, greasing, dipping and spraying. The necessary minerals can now be obtained in convenient tablets, known as Paratabs. Soon after the fowls drink the

mineralized water, all lice and mites leave them. The tablets also act as a tonic conditioner. The health of the fowls quickly improves, they grow faster and the egg yield frequently is doubled. Little chicks that drink freely of the water never will be bothered by mites or lice.

The method is especially recommended for raisers of purebred stock, as there is no risk of soiling the plumage. The tablets are warranted to impart no flavor or odor to the eggs and meat. This remarkable conditioner, egg tonic and lice remedy costs only a trifle and is sold under an absolute guarantee. The tablets are scientifically prepared, perfectly safe, and dissolve readily in water.

Any reader of this paper may try them without risk. The laboratories producing Paratabs are so confident of good results that to introduce them to every poultry raiser they offer two big $1 packages for only $1. Send no money, just your name and address—a card will do—to the Paratab Laboratories, Dept. 895, 1100 Coca Cola Building, Kansas City, Mo., and the two $1 packages, enough for 100 gallons of water, will be mailed. Pay the postman $1 and postage on delivery, and if you are not delighted with results in 10 days—if your chickens are not healthier, laying more eggs and entirely free from lice and mites—your money will be promptly refunded. Don't hesitate to accept this trial offer as you are fully protected by this guarantee. —Adv.

Poultrymen — Attention!



The largest hatchery in the world offers special low prices on S. C. White Leghorn Baby Chicks, from heavy egg laying strain, during months of May and June, 1922. We pay all express charges on shipments for these months.

The Bihn Hatchery, Petaluma, Calif.

S. C. W. LEGHORNS

A WINTER-LAYING STRAIN. 247 to 288 Egg Blood

REDUCED PRICES FOR MAY AND JUNE SHIPMENTS.

Commencing May 1st—Hatching Eggs, $8.00 per 100; $75.00 per 1,000.

Commencing May 15—Day-old Chicks, $16.00 per 100; $155.00 per 1,000. Prepaid to Your Door. Safe Arrival Guaranteed. Orders filled in rotation as received. A big hatch off every week.

You can order direct from this ad with perfect safety that you will get a SQUARE DEAL. Order now—save time. Every egg and chick we ship comes from our own carefully selected breeding stock produced right here on THE FOWLER EGG FARM. No bought up junk, eggs or chicks, handled by us in any way. You will pay a cent or two more per egg or chick for our stock than for the common hatchery chicks, but you get from us a REAL WINTER LAYING STRAIN of Leghorns; a strain that will make you money right from the start.

Mr. Haskell, a customer in Idaho, writes: "172 pullets raised from your eggs have averaged me $4.75 PER DAY for November and December—60 PER CENT DAILY EGG YIELD."

Don't think such a record possible with any other strain of Leghorns. To do this you must have the FOWLER EGG FARM BRED-TO-LAY LEGHORNS. Send us your order today without delay. You will never regret it.

Illustrated Catalog mailed free to those who really mean business. Let us know your wants. Address

FOWLER EGG FARM, Route 1-B, Fowler, Colo.

TOWNSEND FARM

Formerly Mountain View Poultry Farm

HATCHING EGGS

From our superior flock of S. C. R. I. Reds, White Plymouth Rocks and S. C. Buff Orpingtons. Order early to assure yourself of prompt delivery. Prices furnished upon application.

STOCK FOR SALE.

PHONE LAKEWOOD 75. EDGEWATER, COLO.

Directly west and adjoining Lakewood Country Club.

The Cause of White Diarrhea

White Diarrhea is caused by the bacillus Bacterium Pullorum transmitted through the yolk. There is scarcely a hatch without some infected chicks. The germs multiply very rapidly and one infected chick may infect the entire brood. The germs can be killed by the use of preventives. Intestinal Antiseptics to kill the germs should be given as soon as the chicks are out of the shell. It is much easier to prevent than it is to cure.

How to Prevent White Diarrhea

Dear Sir: I see reports of so many losing their little chicks with White Diarrhea, so thought I would tell my experience. I used to lose a great many from this cause, tried many remedies and was about discouraged. As a last resort, I sent to the Walker Remedy Co., Dept. 358, Waterloo, Iowa, for their Walko White Diarrhea Remedy. I used two 50c packages, raised 300 White Wyandottes and never lost one or had one sick after giving the medicine and my chickens are larger and healthier than ever before. I have found this company thoroughly reliable and always get the remedy by return mail.—Mrs. C. M. Bradshaw, Beaconsfield, Ia.

Don't Wait

Don't wait until White Dirrhea gets half or two-thirds your chicks. Don't let it get started. Be prepared. Write today. Let us prove to you that Walko will prevent White Diarrhea. Send 50c for box on our guarantee—money back if not satisfied. Walker Remedy Co., Dept. 358, Waterloo, Ia.—Adv.

Fish Bite like hungry wolves, any season, if wet bait with **Magic-Fish-Lure.** Best Fish Bait ever discovered. Keeps you busy pulling them out. **$1. Box Free** to introduce our new fish and animal traps. Write us to-day. **J. F. GREGORY, Dept. 63, Lebanon, Mo.**

Baby Chicks NEW LOW PRICES SEASON 1922

MILLER BABY CHICKS "ALL BREEDS FOR HEAVY EGG PRODUCTION"

Customers report pullets lay all winter. 20 varieties to select from. 1,000,000 chicks via prepaid parcel post safe delivery guaranteed. Pleased customers in every state. 19th season. Catalog FREE.

MILLER POULTRY FARMS Box 605 LANCASTER, MO.

SHIPMAN'S S. C. REDS

were winners of 2d and 4th cockerels at Denver show, Dec., 1921, also winning 6th and 8th cockerel at National Western Poultry Show, Denver, Jan., 1922. Setting eggs reduced to $8 setting. Ancona setting eggs $2 setting. S. C. Reds and Ancona baby chicks.

W. F. SHIPMAN,
Rt. 2, Box 586. Edgewater, Colo.

Willow Creek Poultry Farm

Breeder of highest grade heavy WINTER-LAYING SINGLE COMB WHITE LEGHORNS. Now booking orders for day-old chicks and hatching eggs from yearling hens on free range. Prices reasonable. Write for catalogue.

WILLOW CREEK POULTRY FARM,
Box 657. Lamar, Colo.

GOOD PRODUCTS CAN ONLY COME FROM GOOD SEEDS.

Therefore, why not be sure that the element of risk is reduced to a minimum. Use our Seeds—they are fresh and tested—pure, true to name and proven of high germination. Write for free Catalogue and price list.

The Rocky Mountain Seed Co.,
1325 15th St. Denver, Colo.

90 Per Cent From Western Farm Life

We get better results from our ad in Western Farm Life than all the rest of our advertising combined. Nine-tenths of our orders were from our ad in Western Farm Life.—RIVERSIDE POULTRY FARM, LaJunta, Colo.

Market Outlook for Farm and Ranch Products.

(Continued from Page 5).

other week or two, although May also brings a rather heavy run as a rule. It is probable that prices have seen bottom for this spring.

Want More Feeders Than Year Ago.

With the grazing season at hand, light stockers have been popular property. Due to discouraging weather the total movement of feeders has fallen off slightly in the last few weeks, although it is running consistently ahead of that of last year.

The movement into Texas and Oklahoma from Texas is near flood-tide. A probable reduction of freight rates on such shipments is a stipulating factor. Nebraska has been absorbing a lot of thin cattle recently and Kansas City reports a generous movement of thin cows to the northwestern range states.

Heavier Hog Run on Horizon.

A ten-day advance in the hog market restored the $11 quotation at Chicago, but the event was short lived. Receipts of hogs have increased and it is probable that the lightest run of the spring season is behind us. Usually there is a gradual increase during May reaching maximum in June after corn planting is over. A sharp decrease then follows in late summer. Prices on the average will follow the course indicated by these changes in receipts.

Easter Lambs at Record Price.

Only a few spring lambs were available for the Easter trade, and selected lots sold up to $26 at Chicago, the highest price on record. No California lambs have arrived in the Middle West as yet, but one trainload is on the way. The new crop appears to be a little late in all sections. The market may be somewhat erratic during the spring months as readjustment is made to the new crop, but all signs point to a rather high basis, barring occasional periods of over-supply.

Wheat Demand Revives.

The long contest between the "bulls" and "bears" in May wheat with its attendant effects upon the cash market, seems to be turning in favor of the bulls, as the statistical position of wheat has indicated that it would. For a time the quantity of May wheat being held by exporters and millers who wished to take delivery, was in doubt, but at present the belief prevails that this exceeds the ability of shorts to make delivery so that the latter are due to be "pinched."

Revival of demand from both mills and exporters was the deciding factor in turning the market. It has made several false starts in the last five weeks, but the present performance bears more evidence of enduring character. If it lasts, the wheat in storage which has been trying to find a buyer will be placed without any difficulty.

Renewal of export buying has made the most impressive showing. Both old and new crop wheat have been bought from North America and France and Italy have bought some Southern Hemisphere wheat on passage. The poor outlook for winter wheat abroad is a source of alarm and has stimulated the purchase of wheat for July and August shipment. Greece is expected to buy 1,500,000 bushels in another week or two and to need nearly that much each month.

Furthermore, large shipments from the Southern Hemisphere finally ceased to depress the European market. Instead, world's shipments have now fallen below the weekly disappearance of imported wheat, and the last report showed a sharp drop in the amount on ocean passage. Broomhall's last report stated that consumption in the present crop year would take care of all the wheat produced during the year and a large part of the carry-over in exporting countries.

Milling demand has improved and flour buyers are showing more activity in some sections, although demand is not as robust as could be desired.

Receipts of wheat have dwindled but are about equal to the ten-year average for this season of the year, although much lighter than last year.

The new crop is making progress, although the effect of unfavorable conditions last fall and winter is still seen in the character of the reports from the Southwest. Abandoned acreage in Kansas has been estimated officially as high as 35 per cent. Much wheat in that state did not germinate until March. All sections need dry, warm weather, especially the spring wheat region, where planting is being delayed.

Light Receipts Aid Corn and Oats.

Although the demand for corn has fallen off sharply, receipts have dwindled to such small volume that the market has strength. Clearances are nearly equal to arrivals at primaries. Shipments from primary markets are now exceeding the receipts and a few good slices have been taken from the visible supply. Oats prices closely follow fluctuations in other grains. Receipts are shrinking and are now below the average for this time of year.

Cash Grain Markets.

The range of cash grain prices follow:

Kansas City—Wheat: No. 2 hard, $1.24@1.59; No. 3, $1.22@1.57; No. 4, $1.21@1.53.

Corn—No. 2 mixed, 53½@55½c; No. 3, 53@55c; No. 2 yellow, 55½@58½c; No. 2 white, 54@56c.

Oats—No. 3 white, 36½@38½c.

Rye—95@96c.

Barley—54@55c.

More Hay Expected Soon.

Heavier receipts of hay are expected as soon as country roads improve. Demand has not broadened at distributing markets, but is limited to local needs. The total quantity of hay, especially clover and alfalfa needed will decline as the pasture season arrives. Thus far prices have held well.

Kansas City: Prairie upland—No. 1, $11.50@13; No. 2, $9.50@11. Alfalfa—Choice $24@25.50; No. 1, $22@23.50; standard, $19.50@21.50; No. 2, $16@19. Straw, $8.50@9.

Egg Receipts at Maximum.

Receipts of eggs at the four leading cities are practically at a record level, but it is probable that they are now at or very near the maximum. Prices are low enough to induce cold-storage operators to take about 60 per cent of the supply. A further decline in values is improbable unless the extremely heavy receipts hold up longer than they usually do.

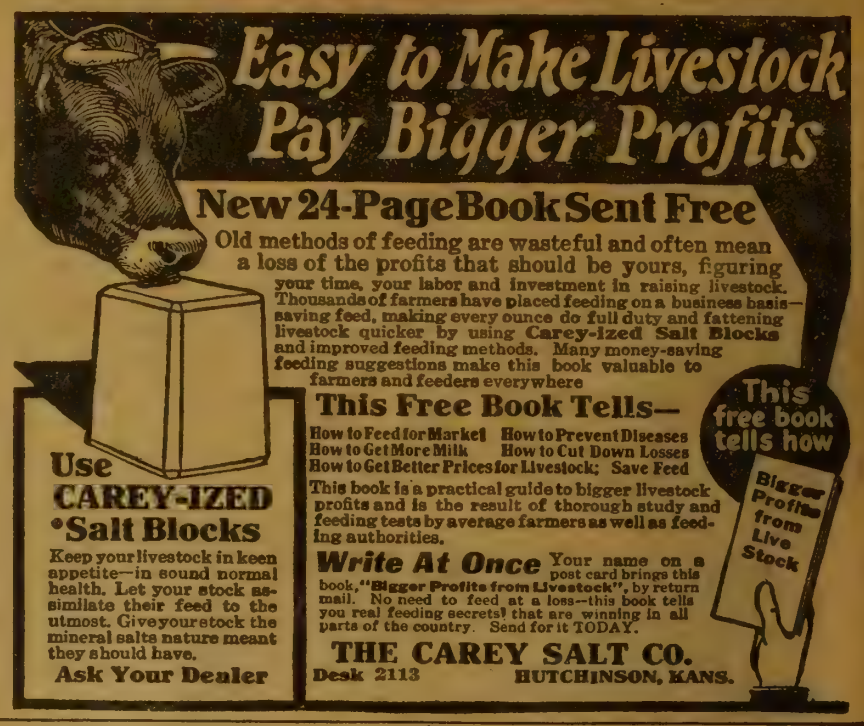
Receipts since January are but little behind the record movement of last year, while there is a substantial shortage in storage holdings at the four cities compared with a year ago, indicating that consumption is unusually large. Latest quotations:

Kansas City: Eggs—Firsts, 22c; seconds, 18½c. Live poultry—Broilers, 45c; heavy hens, 22c. Roosters, 13c. Ducks, 25c. Geese, 16c.

Denver—Eggs, 24@25c. Live Poultry: Hens, 26c; springs, 38c; broilers, 30@35c. Roosters, 15c. Ducks, 30c. Turkeys, 27c.

Butter Buyers Pinched.

Butter buyers who have been following a hand-to-mouth policy for several weeks in the expectation that prices would decline rather steadily, were confronted last week with a small decrease in receipts of fresh butter and by light cold-storage holdings. As a result, the market turned suddenly and staged a sharp advance. Such behavior is not uncommon at this season of the year when readjustment is being made to the spring increase in production. Bad weather has made the season later than expected and by preventing deliveries of cream has lowered the average quality of the butter produced, making fancy butter more scarce than it has been for several weeks.



The upturn undoubtedly will prove short-lived, as maximum receipts have not yet been seen and prices are not down to a spring basis. All interests are avoiding holding heavy stocks.

Prices for 92 score fresh butter on April 19 were:

Chicago, 37½c; New York, 39½c; Philadelphia, 39½c; San Francisco Exchange quotation, 75c.

Potato Shipments Setting Record.

Shipments of potatoes from producing states since April 1 have set a new record. The movement is about one-third larger than the average at this season of the year, and the season's total is about 30,000 cars larger than at this date last year.

Demand has been limited and prices weak. Northern sacked round whites are quoted at $1.60 to $1.75 in the Chicago carlot market, while Rurals are bringing $1.60 to $1.70.

Southwest Stock Show at Lamar Scores Success.

(Continued from Page 3.)

ond. Green Mountain Dairy was first grade herd and Harry Heath second. Get of sire in purebred herds, always a coveted award, was won by Model Dairy Farm, and second by Center Farm. In grades, Turpin and De Witt showed the winning group with Markham second. In the production class the award for highest year's production in the cow testing association on purebred cows went to a Center Farm cow. Record cow for the year in grades came from the Harry Heath herd. J. A. La Rose won first in aged Jersey cow class and Joe Sproul first in heifer class.

A roan bull shown by Wm. Briskey of Lamar won first in the shorthorn class and Chas. McCall of Lamar won first on Hereford bull. A. Everett & Company won all the fat steer prizes.

Placing the Hog Awards.

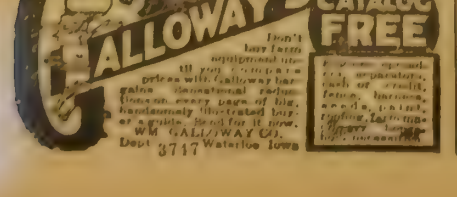
Hogs were judged by Wm. Droge, county agent of Otero county. In Duroc Jerseys, Fred Lovejoy won first in aged boar class and Center Farm first on boar under one year. In under six month class of boars, Center Farm won first and B. E. Sterret of Bristol second. Sterret had the first aged sow and first under one year sow. Center Farm won first on sow pig. A. F. Ogden of Graft won second on sow under one year.

In Poland Chinas, Fletcher Brothers,

(Turn to Page 16.)

Recent Range of Livestock Prices at Our Principal Markets.

Cattle—	Denver.	Kansas City.	Omaha.
Choice and prime heavy steers (1100 lb. up).	.....	$8.00@ 8.85	$8.00@ 8.65
Good heavy steers	.....	7.40@ 8.30	7.50@ 8.15
Medium heavy steers	$7.00@ 7.75	7.35@ 7.85	7.00@ 7.50
Common heavy steers	5.50@ 7.00	6.40@ 7.35	6.25@ 7.00
Choice & prime light steers (1100 lb. down)..	.....	8.30@ 9.00	8.25@ 8.75
Good light steers	.....	7.60@ 8.40	7.50@ 8.25
Medium light steers	6.75@ 7.50	7.10@ 7.85	7.00@ 7.50
Common light steers	5.25@ 7.00	6.25@ 7.40	6.25@ 7.00
Common to choice butcher heifers	4.25@ 7.00	5.00@ 7.50	4.75@ 7.50
Common to choice butcher cows	4.00@ 6.25	4.40@ 6.40	4.25@ 6.75
Bologna and beef bulls	2.50@ 4.25	3.25@ 5.25	3.25@ 5.25
Canners and cutters, cows and heifers	2.50@ 3.50	2.75@ 4.50	2.75@ 4.25
Canner Steers	3.50@ 4.50	3.50@ 4.25	3.25@ 4.25
Medium to choice light veals	8.50@12.00	5.00@ 8.50	8.25@12.00
Common to choice heavy veals	4.50@ 8.50	3.50@ 7.50	5.25@ 8.50
Common to choice feeders (1000 lb. up)	5.50@ 7.25	6.00@ 7.85	5.75@ 7.75
Common to choice feeders (750—1000 lb.)	5.00@ 6.75	5.90@ 8.00	5.50@ 7.65
Common to choice stocker steers	4.50@ 6.50	5.25@ 7.90	5.25@ 7.85
Common to choice stocker cows and heifers.	4.50@ 5.25	3.75@ 6.35	4.00@ 6.25
Hogs—			
Top of Market	$ 10.70	$ 10.50	$ 10.55
Bulk of Sales	10.00@10.40	9.70@10.45	9.70@10.35
Heavy (250 lb. up)	8.75@10.00	9.60@10.35	9.70@10.35
Medium (200—250 lbs.)	10.00@10.40	9.75@10.50	9.80@10.40
Light (150—200 lb.)	10.00@10.70	9.65@10.50	9.90@10.40
Light lights (130—150 lbs.)	.....	9.50@10.40	9.50@10.40
Smooth packing sows (250 lb. up)	8.50@ 9.00	8.50@ 9.35	9.00@ 9.75
Rough packing sows (200 lbs. up)	7.50@ 8.50	8.25@ 9.50	8.75@ 9.25
Medium to choice pigs (130 lb. down)	8.75@ 9.25	.....	.....
Stock pigs	8.75@ 9.00	9.25@10.35	9.25@10.50



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All letters regarding commercial and technical features of dairy farming and hog production promptly answered. Address all communications to Dairy Department, Western Farm Life, Denver, Colorado.

The summer season always is a critical period for the milk cows. Flies and hot weather frequenty are given as reasons for cows falling off in milk production. Lack of proper feed is a contributing factor often overlooked. The time to provide against this contingency is in the spring. Some of our most successful dairymen are able to hold the milk up even during the summer months. They do it by having plenty of the right kind of feed for their cows. A small silo is provided or feed crops are planted near the barn, so the cows can be fed green sweet corn, or ordinary corn, Sudan, milo, or feterita. Having some of these crops available when the pasture fails, which is every summer, will do wonders in keeping up the milk flow. It takes plenty of palatable, succulent feed to make milk. The pastures never supply enough feed in the plains regions. Now is the time to plan for these feed crops if you would keep your cows up in milk during the summer season.

Herd With High Production Record.

An average production of 1,502 pounds of milk and 52.8 pounds of butterfat was made by the eighteen cows in the herd of Marcus Harper of Boulder County Cow Testing association for the month of March. The high herd of those under fifteen animals was the Jersey herd of C. C. Clingman of Boulder, with an average production for twelve cows of 949 pounds of milk and 50.5 pounds of butterfat.

The high cow for March was Alcartra Dode Seldene, belonging to Mr. Harper, with a production of 1,932 pounds of milk and 85.1 pound of butterfat. Hilde, belonging to Harry Yeager of Longmont, was second, with 2,102 pounds of milk and 78.2 pounds of butterfat, and Polly, belonging to F. A. Barhite, third, 1,662 pounds of milk and 71.4 pounds of butterfat.

Harry Yeager's herd of nine cows is the only herd other than the two high herds qualifying for the honor list for March. The average production was 1,304 pounds of milk and 46.5 pounds of butterfat.

There were 217 cows tested for the month, with an average production of 971 pounds of milk and 38.1 pounds of butterfat.

Lady Bess Homestead, a registered Holstein belonging to Willard Forsythe, finished her year's record with a production of 15,817 pounds of milk and 540.1 pounds of butterfat. Roughage for the year cost $34.25, and grain $53.30, a total feed cost of $87.55. The value of the product was $231.31, leaving a profit over feed cost of $143.76. The cow made a daily average of 43.3 pounds of milk for the year.

Valuable Bull Sacrificed.

A dairy farmer once sold a registered Holstein bull to a local butcher. He had no records on his daughters. Within a year eleven of the two and three-year old heifers sired by this bull freshened. Records were made of their production and to the astonishment of every one the average milk production for a year was 14,502 pounds, and butterfat 573 pounds. But the bull was dead and his hide made into leather. For lack of records a $5,000 bull had been sold for $50. Cow testing association records of the dams and daughters would have saved this bull for service. Through the organization of a bull association in co-operation with a cow testing association a bull can be kept long enough to get production records on his daughters. Registration cannot guarantee production. Registered sires must be backed by good production records. They may have plenty of capacity to sire production, but without the records there is nothing to prove it.

Arkansas Valley Cow Records.

Profits over cost of feed ranging from $7.60 to $14.60 a cow were made in the five top herds of the Arkansas Valley Cow Testing association for the month of March. There were ninety-three cows producing more than forty pounds of butterfat and 1,000 pounds of milk for the month, forty-one more than in February. The average feed cost of producing a hundred pounds of milk for the 287 cows tested was 63 cents, and the market value of 3.44 per cent milk $1.52, an average profit of 89 cents a hundred pounds over cost of feed.

Feed prices were a little higher this month than in February, but by making some slight changes in rations, substituting some of the cheaper protein feeds for those which had gone up in price, the actual cost of production was kept down almost as low as for the previous month. It was 60 cents a hundred pounds in February.

The five high herds for the month were the Green Mountain dairy of Lamar with a profit over feed of $7.60 a cow; Model Dairy, Holly, $10.65 a cow; Harry Heath, $13 a cow; Turpin & DeWitt, $14.60; and Coy Barnard, $11.10 a cow. The highest profit cow for the month was a purebred Holstein, Pearl Mooie Douglas, owned by Harry Heath, making a return over cost of feed of $33.10. Next came Mulvie Hengervelt Pet, Model Dairy, $30.40; Parimity Shadeland Korndyke, Model Dairy, $24.70; Stella Ringwood Korndyke, Model Dairy, $24.20, and fifth, Parimity Oaks Korndyke Montel, Model Dairy, with a profit of $19.60 over feed cost. The Heath cow has been high cow of the state testing associations for two months.

Max Grandy, tester for this association, says the cows are holding up unusually well for this time of the year. Several of the herds are showing the benefits of rye and alfalfa pasture with the reduced cost of production as well as increased yields.

Hogs Have Free Range.

My first step in getting into the hog business was to fence my farm hog-tight. I then purchased some good grade sows and a purebred boar and from the litters selected the best gilts for future brood sows. I obtain a new boar each year. My hogs run out all the time, as I have running water on the farm, and have alfalfa pasture fenced off for them in the spring and summer.

When I get ready to feed for market in the fall, I turn the brood sows and pigs out and let them pick up the waste grain from the whole farm and when winter comes they go to the hay racks and make their own living. I use self-feeders for grain in which I feed ground barley. While fattening the hogs run on green alfalfa and at the end of five weeks average 250 pounds in weight. They have been brought to this weight at small expense.

I raise pigs the year round, using a warm farrowing house with the south side open to let in the sun. A few days before the sows are due to farrow, I put each one in a roomy stall and handle them gently so I can get in and look after the pigs, if necessary. The sows get nothing to eat until the pigs are twenty-four hours old, when I give them ground barley, skimmed milk, and alfalfa hay.

When the pigs learn to eat, I have a pen for them to slip into, feeding them ground barley in troughs with skimmed milk poured over it. As the pigs grow older, I feed them more, giving the sows less until the pigs are two months old, when I wean them and breed the sow.

I do not let my pigs get too fat, giving them plenty of exercise. Handled in this way, they will not have the thumps, and when alfalfa comes in the spring the fall pigs are ready for it and by fall they are ready for the self-feeder.—W. P. Harp, Weld county, Colo.

Keep Your Pigs Growing.

As soon as the little pigs will eat they should be fed in addition to what they get from the sow. This will pay no matter how good a suckler the sow may be. It is the only way to push the pigs to early maturity. Provide a creep where the pigs can slip through and eat by themselves. If skimmed milk is available give them some in a shallow trough. They will also soon learn to pick up shelled corn. As soon as they get to eating well a slop made of skimmed milk, some shorts, a little bran, and some linseed oil meal or tankage along with the corn will push them rapidly. Four parts shorts by weight, one part bran and one part tankage is a good mixture to use. The shelled corn can gradually be increased as the pigs grow older.

There's real Cow-comfort in a Stall like this. Good cows deserve it, in fact, they must have it to do their best as producers.

Catalog and prices on request.

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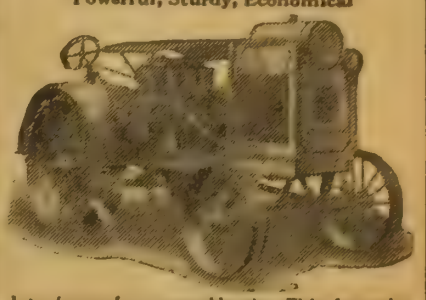

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POULTRY

RHODE ISLAND REDS.

R. C. RED EGGS, $4.75 PER 100, POSTPAID. Fleda Jenkins, Jewell, Kan.

PURE LARGE DARK SINGLE RED COCKERELS, $2.50. Eggs, $1.25, 15; $6 per 100. Francis Downs, Talmage, Kan.

RHODE ISLAND RED HENS AND COCKERELS, both combs; eggs, $1.50 setting. Claude Musselmann, Lyons, Neb.

EGGS FOR HATCHING FROM OUR HOGANIZED flock of dark Single Comb Reds; pens, $5 a setting; flock, $7 per 100. The James Sisters, Olathe, Kan.

S. C. REDS—TEN YEARS CAREFUL MATING for egg production; $2 per 15, $7 per 100. Special mating, $3 per 15. Cockerels all sold. L. A. Davids, Henderson, Colo., or Dr. F. S. Schoenleber, Stockyards, Denver.

RHODE ISLAND RED FARM—EXCLUSIVE breeders of thoroughbred Single Comb Rhode Island Red baby chicks and hatching eggs. Some fine cockerels for sale. All stock sold on a money-back guarantee. We are now booking orders for May and June delivery and can accept a few more for the latter part of April. Try Oregon Reds. Send for catalog. Rhode Island Red Farm, Rt. 6, Box 202, Portland, Ore.

LEGHORNS.

SINGLE COMB WHITE LEGHORN CHICKS—From choice Hoganized flocks; heaviest winter layers; live delivery, postpaid, 14c. Wylie's Hatchery, Clay Center, Kan.

SINGLE COMB BROWN LEGHORN BANTAMS—Fifteen eggs, third zone, prepaid, $1. G. F. Weaver, Cross Mountain, Colo.

S. C. WHITE AND BROWN LEGHORN EGGS, $3.75 per 100, postpaid. Baby chicks, 11c. Jenkins Poultry Farm, Jewell, Kan.

MILE-HIGH SINGLE COMB WHITE LEGHORN hatching eggs; pen A, 250 to 280 year hens; male is son of the world's highest official record Leghorn hen; Hollywood strain; why not get a few grandsons and daughters of world's best hens? Mean something, Mr. and Mrs. Poultry Breeders; $5 setting of 15 eggs. Pen B, 190 to 250 year hens, $2 setting, $7 100, $65 1,000. Eggs guaranteed 100% fertile and reach you in good shape, postage prepaid, and you must be pleased. We don't shut everything up on this farm and call it a breeding hen. Mile-High Poultry Farm, Wheatridge, Colo.

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SILVER LACED WYANDOTTE EGGS, $5 A HUNdred. Mrs. Walter E. Christian, Route 5, Clyde, Kan.

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EXCEPTIONAL QUALITY WHITE WYANDOTTE eggs; pen setting, $3; range setting, $1; 100, $5. Folder free. Richard Matoush, Julesburg, Colo.

PLYMOUTH ROCKS.

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BARRED ROCK COCKERELS, CHICKS. RINGlet exhibition and trapnest strain. Record to 290, over 100 premiums. Eggs, 15, $2; 100, $8. A. G. Hammond, Vinland, Kan.

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LARGE TYPE PURE SINGLE-COMB BLACK Minorca winners. Eggs, $6 per 100; chicks, 16c. Herbert Rhodes, Clifton, Kan.

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BARRED ROCK EGGS—THOMPSON'S "RINGlets," heavy laying strain. Dark, narrow barred to the skin. Flock, $2 for 15; $6, 50; $10, 100. Special matings, $5 for 15; prepaid. Arthur Waechter, Yuma, Colo.

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WARREN'S QUALITY WHITE ROCKS, FISHEL strain direct, winners of firsts and sweepstakes for five years in Jewell county. Breeding stock carefully selected, "eggs" and "baby chicks" for sale. Warren's Eclipso Poultry Farm, Mankato, Kans.

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BRONZE TURKEYS, NATIONAL WESTERN AND Heart of America winners; eggs, 50c, 75c, $1 and $1.50 each. Poults $1 and up. Cora De France, Berthoud, Colo.

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MAMMOTH PEKIN DRAKES, $2. MRS. FRANK Doty, Humboldt, Kan.

WHITE PEKIN DUCK EGGS, 12 FOR $1.25. Gerald Steele, Greeley, Colo.

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CATTLE.

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WE OFFER THREE YOUNG REGISTERED JERsey bulls at bargain prices. Best breeding. Highlands Jersey Farm, Colorado Springs, Colo.

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STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24TH 1912, OF "WESTERN FARM LIFE," PUBLISHED SEMI-MONTHLY AT DENVER, COLO. FOR APRIL 1st, 1922.—State of Colorado, County of Denver. Before me, a notary public in and for this state and county aforesaid, personally appeared W. S. Edmiston, who, having been duly sworn according to law, deposes and says that he is the publisher of the Western Farm Life, and that the following is to, the best of his knowledge and belief a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to-wit:

1. That the names and addresses of the publisher, editor, managing editor and business manager, are:

Name of publisher—W. S. Edmiston, Denver, Colo.. Editor—None. Managing Editor—Geo. C. Wheeler, Denver, Colo. Business Manager—H. C. Hardison, Denver, Colo. 2. That the owners are: The Farm Life Publishing Co., Denver, Colo. W. S. Edmiston, Denver, Colo. H. C. Hardison, Denver, Colo.

3. That the known bondholders, mortgagees and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages or other securities are: Mergenthaler Linotype Co., New York City, N. Y. F. W. Hazard, Denver, Colo. C. B. Cottrell & Sons Co., Westerly, Rhode Island.

4. That the two paragraphs next above giving the names of the owners, stockholders and security holders, if any, contains not only the list of stockholders and security holders as they appear upon the books of the company, but also in cases where the stockholders or security holder appears upon the books of the company, as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association or corporation has any interest, direct or indirect, in the said stock, bonds or other securities than as so stated by him.

W. S. EDMISTON, Publisher.

Sworn to and subscribed before me this 4th day of April, 1922.

O. LEROY EMMICK, Notary Public.

(My commission expires June 4, 1923.)

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MRS. R. G. DOUGLAS,
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We can supply you with that same line of breeding. Write

McKAY BROS., Caddoa, Colo.

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TYPE

We offer you a wonderful amount of these Holstein qualities—and from a clean herd. Bull calves from fine record dams. Pahgre Valley Ranch, Loesch Bros., Montrose, Colo.

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BREEDING

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Twenty cows in this herd on an official seven-day test averaged 446.13 lbs. of milk and 20.19 lbs. of butter.

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We know the war is over and have bulls for sale at prices that you farmers and ranchmen can afford to buy. Write for our bargain list and easy payment plan.

We also have several young bulls for sale, priced to sell.

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Bates Shorthorns

are the foundation blood of true Milking Shorthorns. We have them. A few bulls for sale.

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Buy MILKING SHORTHORNS

from the oldest established herd in the state. We can supply your needs in bulls of beef type either horned or polled Shorthorns. Write Superintendent for folder on breeding and prices.

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All Cows in Milk Officially Tested. Service bulls of World's Record breeding. Both males and females for sale. Personal inspection invited. Send for Illustrated Booklet.

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GREAT BARGAINS, 960 HEAD HEREFORDS, SHORTHORNS, ABERDEEN ANGUS

1, 2, 3, 4 and 5 years old. Cows, heifers and bulls. Prices $75 to $120 and up. 360 Percheron and Belgian horses, stallions, mares and colts, 1 to 6 years old. Prices $125 and up per head. One head or a carlot. Breeding guarantees with each. Registered pedigrees by mail. Stock on twenty farms in Iowa and Illinois. Write for circular and particulars. Address ILLINOIS HORSE & CATTLE CO., Good Block, Des Moines, Iowa.

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21 A. R. O. COWS, 3 STATE CHAMPIONS; TWO 30-POUND 4-YEAR-OLDS; 25 DAUGHTERS OF A. R. O. COWS.

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I have taken the franchise for the Franklin car and must sell out to get necessary capital.

TERMS—Six months without interest on notes with approved security or 5 per cent discount for cash.

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FOUR YEARS THE BEST

Meat Type Hampshires

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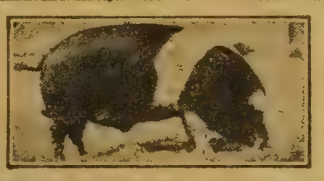

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SUNNYSIDE ROBERT

SHORTHORNS

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Chester White hogs of best breeding stock for sale. Also Ringlet Barred Rock eggs for hatching. G. W. BALL & SONS, Pierce, Colo.

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In picking your Shorthorn breeding stock, remember

SNOW KING

breeding has proved itself in the show ring. Lord Douglas calves out of Snow King heifers are even better. We will have some bulls of this breeding for sale this summer.

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Fort Collins, Colorado.

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THE MARKET LOOKS PROMISING.
RESTOCK NOW WITH

HEREFORDS

Some choice heifer calves and a few bulls of Beau Santos and Bright Stanway breeding are for sale.

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Cows from Polled Plato, herd headed by POLLED SUCCESS A 3rd. Young bulls and heifers for sale.

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Mather's Big-Type Polands

sold to breeders in four states this year are giving satisfaction.

BUY WEANLING PIGS

at prices that will surprise you.

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CHOICE BIG-TYPE

Poland China Pigs

Either sex, sired by F. B's Long Bob. ...WHITE LEGHORN EGGS. $2.00 per setting, $7.00 per 100.

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Just a few real herd headers yet ready to go at pre-war prices. Used with grade sows even, they will more than pay for themselves on the first crop of pigs. Write today.

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Livestock Auctioneer and Duroc Breeder.

DUROCS.

DUROCS Gilts bred to my champion boars and June pigs from my great yearling "Gold Chief" and a daughter of the World's Grand Champion, Great Orion Sensation, can be seen at the Stock Show.

J. W. Brauer,
22 Lorraine St., Colorado Springs, Colo.

State Farm Bureau News.

Reports on the membership campaign made at the regular quarterly meeting of the executive committee of the Colorado State Farm Bureau show that substantial progress had been made in the membership campaign in Colorado. Unusual interest is being shown in the organization and its work, according to all reports from the field, and the biggest problem that confronts the state organization is getting to the individual farmers who are ready to join.

J. D. Pancake of Loveland is president of the Colorado State Farm Bureau; J. M. Rodgers of Wellington, organization director; E. R. Bliss of Greeley and H. L. Lowell of Castle Rock, members of the tax committee, and F. R. Lamb of Fort Collins, secretary. These men constitute the executive committee. All were present at the last regular meeting except Mr. Pancake, who is spending several weeks in Chicago as member of a special organization committee of the U. S. Grain Growers, Inc.

Principal matters discussed at this meeting were reports on the membership campaign by Mr. Rodgers, and on the activity of the taxation committee by Mr. Bliss and Mr. Lowell. Rr. Rodgers' reports of the membership campaign showed that the campaign under the new organization plan issued by the American Farm Bureau Federation was making rapid progress. The work in the several counties had developed rapidly and the solicitors in the field were getting good results. Details as to the general supervision of the campaign were discussed and definite plans were outlined for further conduct of the campaign.

Taxation Committee Reports.

Much valuable information has been obtained by the taxation committee, as shown from the report made by Mr. Bliss at the executive meeting. A great deal more definite information is necessary before any state-wide recommendations can be made which will meet with general approval. The experience of these men and the investigations they have already made emphasize the fact that a united effort on the part of the farmers of Colorado is necessary if any relief is to be expected from the present excessive tax burdens. Mr. Bliss reports that methods of securing lower valuations on farm lands, getting all taxable property in the state listed with the county assessors, closer relationship between state tax commission and the taxpayer, means of getting relief measures through legislation and advisability of hiring a taxation expert were things that would receive the attention of the taxation committee. Mr. Bliss and Mr. Lowell plan to continue this work and endeavor to get definite first-hand information.

Marketing of Feeder Cattle.

Plans are now being worked out by the Colorado State Farm Bureau and the Livestock Growers' association of Colorado for the co-operative marketing of feeder and stock cattle direct from the ranges of Colorado to the feed lots of Colorado, or other states. The success of this plan has been demonstrated by the Ohio Farm Bureau Federation in the purchase of 2,000 head in Colorado last fall, and the plan has met with the approval of all organizations interested in the co-operative marketing of livestock As soon as these plans have been completed they will be submitted to the growers for approval.

Charles G. Stonebraker, fieldman for the American Farm Bureau Federation, who has been working in Colorado, was called to his home in Iowa by the illness of his son. R. C. Pollock of the Chicago office is now in the state helping with organization until Mr. Stonebraker is able to return. Mr. Pollock will either remain with us or send another fieldman from the Chicago office.

In Larimer county H. R. Lascelles of the State Dairy Commission office, is working with County Agent D. C. Bascom and the county farm bureau in forming a cow testing association in the Loveland and Fort Collins districts, where 150 cows have been listed so far. This association for the present will be a part of the Johnstown association where 500 cows are now being tested. The county commissioners have agreed to purchase poisoned grain for two townships now in pest districts if the farmers in and around this territory will distribute the poison.

County Agent J. C. Hale of El Paso county is working with the county farm bureau of that county for the formation of a seed improvement association for the purpose of encouraging the production of certified seed in El Paso county. This county will then be prepared to co-operate with other counties in the formation of a state association as soon as enough interest has been shown in the work. The fields will be examined and certified by the local organization in co-operation with the agronomy department of the Agricultural college, which will have charge of the registration and selection. The growing of registered seed has proven to be as valuable to the grain growers as registered and selected animals has been to the livestock industry, and its future in this state is promising.

Supervision of the recording of growers' contracts of the U. S. Grain Growers, Inc., is under the temporary supervision of John D. Pancake, Loveland, Colo., a director of the organization, who, together with the president and vice president, is serving on a special committee on reorganization and retrenchment authorized at the first meeting of the new board of directors.

At the close of a brief hearing, April 6, 110 individual commission men representing thirty-nine "old line" commission firms comprising the entire membership of the St. Louis Livestock Exchange, pled guilty to the government's charge of instituting a boycott against co-operative commission firms at the St. Louis stock yards and consented to an open market. This was the first formal complaint to be filed by the Secretary of Agriculture under the Packers' and Stock Yards Control Act approved August 15, 1921, and resulted in a complete victory for co-operative livestock marketing.

Southwest Stock Show at Lamar Scores Success.

(Continued from Page 12.)

Wiley, won first on aged boar, and Clof Simpson of Lamar first on under year boar and on boar pig. D. C. Poole, Lamar, won first and second in the aged sows. In under year sow class, W. D. Clark, Lamar, won first, and Clof Simpson first on sow pig. Sweepstakes boar of the show went to Fletcher Brothers, and sweepstakes sow to D. C. Poole. J. A. La Rose won first on pen of fat hogs and Sterret second.

Keen interest was shown in the judging of horses, which was done before the dairy cattle were judged. Mr. Droge made the awards. In registered stallion class, B. T. McClave won first and Center Farm second. McClave also won first in the draft team in harness class and George Deiterly second. This was an exceptionally strong class. Center took first on mule team, and H. H. Cook, Lamar, first on mule colt. Noah Barnhart, Lamar, took first on horse colt. Roy George won the pulling contest.

In the sheep show, Clof Simpson won first on ram and Wm. Hutchinson, Lamar, first on pen of fat lambs.

No classification had been made for Spotted Poland Chinas, but John M. C. Patterson made a good showing and won a membership in the Spotted Poland China Record association on his boar and also one on his aged sow.

Judging was completed Saturday afternoon and during the afternoon the prize winning animals paraded the streets. In the evening a banquet was given. C. C. Goodale of the Lions Club acted as toastmaster. Among the speakers were Prof. J. B. Fitch of the Kansas State Agricultural college, who judged the dairy cattle; Wm. F. Droge, county agent of Otero county; J. L. Beaman, secretary of the Colorado State fair; Fred Waddell, secretary of the Colorado Holstein club, and H. L. Lascelles of the State Dairy Commissioner's office.

A meeting of Holstein breeders was held Friday evening and steps taken to organize a local Holstein breeders' association. At a later date the matter will be taken up and the organization completed.

The success of this show should establish Lamar as the center of the livestock interests of this section. Already the men who made this initial effort at Lamar are planning for next year a bigger and better show. It is the intention to make the Southwest Stock Show an annual event.

Elbert Shorthorn Sale Postponed.

Owing to heavy rains making the roads impassable, the Elbert County Shorthorn Association sale to have been held Wednesday, April 26, was postponed one week and will be held May 3, rain or shine. There were not enough buyers present to take all the animals offered and it was thought to be more fair to all to set the new date.

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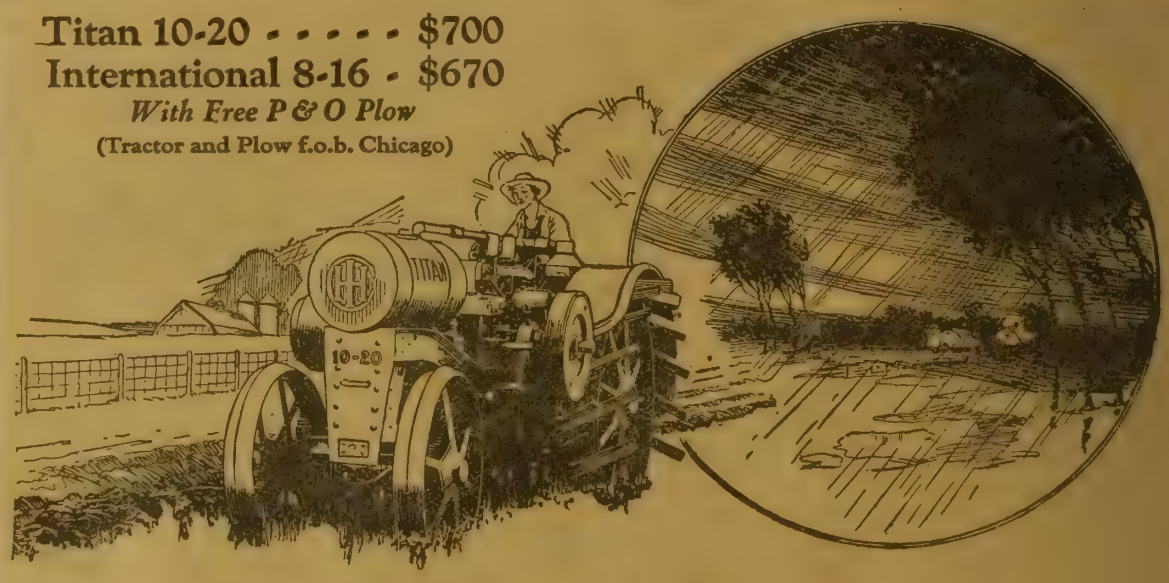

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Our original Free Plow Offer was advertised to close on May 1, as that is ordinarily the end of the heavy tillage season. But after weeks of delay thousands of acres remain untilled, and an unexpected need has developed for Titan and International tractor power.

To keep in line with the unusual season we have instructed the McCormick-Deering Dealer in your locality to extend our Free Plow Offer for 20 days. Until May 20 you can buy a Titan or International tractor at the present low prices, and receive a free plow or tractor disk harrow as outlined in our original Free Plow Offer announced February 3, 1922.

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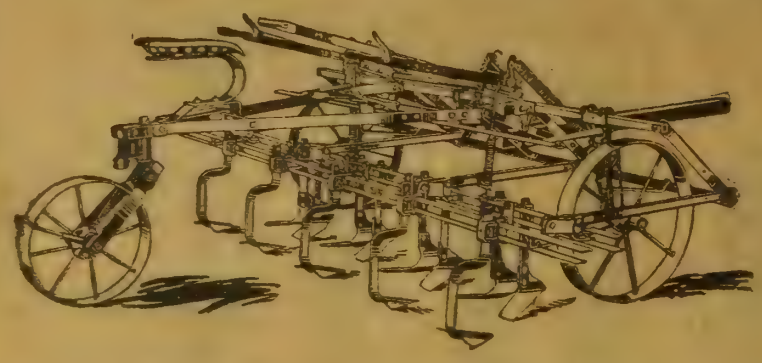
How to Make Profitable Income on Plains Farm—Page 5

WESTERN Farm Life

Vol. XXIV. *Denver, Colorado, May 15, 1922.* *Semi-Monthly*

P. & O. Beet Tools



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P. & O. Beet Tools, for seeding, cultivating, and pulling, are implements worthy of the enviable reputation they enjoy. Huge beet crops have been produced with them—due largely to absolutely even seeding and to proper cultivating at the important stages of growth. Any McCormick-Deering Dealer will gladly show you the complete line. Or you can write us for our pamphlet, "P. & O. Sugar Beet Implements."

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Plants four rows at one time at varying distances. One hopper and planter appliances can be removed, reducing it to a three-row drill. Plates can be supplied for planting beet seed, corn, beans, kafir corn, milo maize, broom corn, canteloupe seed, etc. Equipment—regular and extra—to meet the conditions for planting any of the seed mentioned above.

P. & O. Four-Row Beet Cultivator

Made in two sizes, two-row and four-row, the latter being convertible to a three-row cultivator. Adjustable in width to follow any different widths of planting. Can be furnished with various cultivating appliances, including irrigating shovels, duck feet (large or small), deer tongues, knife weeders, disk weeders, and wire or sheet-iron shields.

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Birds Help Control Insects.

ZELLA WIGENT.

Without birds insects could not be held in check. Few plants could live and the world would be filled with a mass of writhing, biting, crawling things. Scientists describe more than 300,000 kinds of insects and there are many more that have not yet been described. It has been estimated that insects destroy one-tenth of all the grain, fruit, and vegetables grown. This damage amounts to fully two billion dollars each year.

Insects lay many eggs and produce a great number of young. It is estimated that one pair of potato beetles in one season, if left undisturbed, would multiply to 60,000,000. The offspring from a single pair of gypsy moths, if not checked, would in eight years become so numerous as to destroy all the plants.

Insects are great eaters. Many caterpillars daily eat twice their weight. This is equal to an ox devouring three-fourths of a ton of grass a day.

Some caterpillars eat 200 times their own weight in twenty-four hours. This would be equal to a 200-pound man eating twenty tons of food a day. Certain caterpillars in thirty days increase in size 10,000 times. If a boy grew at this rate he would weigh forty tons when he became of age.

It takes lots of food to keep such large families of insects growing at such rapid rates.

No spraying material, however cheap and effective, can do all that birds do to kill insects, and the birds do it without cost.

Every destructive insect is on the bill of fare of one or more of our native birds. Even birds that do not eat insects to any great extent themselves, feed insects to their young. The saving of crops due to birds is estimated at $444,000,000 every year.

Birds are as great eaters as insects are. Many birds eat more than their own weight daily. To give an idea of the number of insects eaten by birds, we quote Chapman: "The stomach of a single cedar waxwing contained 100 canker worms; one cuckoo ate 250 caterpillars; 454 plant lice were found in the stomach of one chickadee; a nighthawk made a meal on 600 grasshoppers; a flicker devoured 1,000 chinch bugs; a scarlet tanager ate 630 gypsy moth caterpillars in eighteen minutes, or at the rate of 2,000 an hour; a Maryland yellow-throat ate 3,500 plant lice in forty minutes, or at the rate of 5,200 an hour."

Soft Water for Radiator.

If possible, soft water, rain water, or melted snow should be used in filling the cooling system. Continual condensation causes a deposit of salts if the water contains such minerals, and these deposits adhere to the inner surfaces of the radiator metal, reducing the cooling efficiency of the system. Water spilled in pouring it in the radiator will sometimes put a magneto out of commission, break a spark plug porcelain or short-circuit the electric system. Carbonate of soda, familiarly known as washing soda, dissolved in soft water, one pound to a gallon, and then poured into the cooling system while the engine is run for half an hour, will clean out the sediment that accumulates and clogs up the tubes of the radiator.

Over Ten Million Motor Cars.

Registration of motor cars in the United States for the year 1921 totaled 10,448,632. This represents an increase of more than a million vehicles over the 1920 figures, or a number equal to the total number nine years ago. The greatest increases in registration were in the industrial sections and the smallest in the agricultural regions.

Cleaning Rear Axle.

The gum and grease that accumulate on the rear axle may be easily cleaned with a cloth wet with kerosene. A stiff brush will reach the grooves and corners, and the cleaning will be easier if the kerosene is warmed.

Rocky Ford Wins Contest.

First place and the big trophy cup in the state high school stock judging contest held at Fort Collins, April 14, was won by the Rocky Ford team. Holyoke, Canon City and Greeley followed next in order. The high man was Alfred Bunger of Rocky Ford. Nine high schools had teams in the contest. The challenge cup was offered by Colorado Agricultural College Livestock club.

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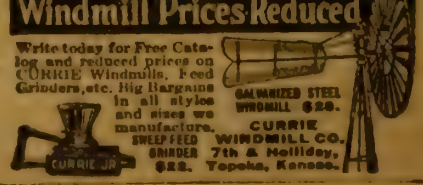

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Western Farm Life

A Western Magazine for Western Farmers and Stockmen

VOL. XXIV. DENVER, COLORADO, MAY 15, 1922. No. 10.

Experiment Station Steers All Return a Profit

DRIED MOLASSES BEET PULP EXCELLS CORN IN FINISHING RATION

By George C. Wheeler.

CATTLE at the Colorado experiment station feed lots at Fort Collins were matured into prime beef without a pound of grain in the steer feeding experiment closed April 22. The results were given to a large group of feeders and livestock farmers Feeders' Day, April 28. The top lot of ten steers had been fed wet beet pulp, beet molasses, alfalfa, and a little cottonseed cake, and dressed out 63.70 per cent. They made a profit over feeding and marketing costs of $27.83 a head, gaining for the 140 days they were on feed at the rate of 2.53 pounds to the steer a day. They were valued at the station April 28 at $8.25 a hundred pounds by Ben F. Snider and H. F. Blayney of the Denver stockyards.

Steers All Return Profit.

The second lot in point of profit was lot 6, returning over feed and marketing costs $19.40 a steer, with average daily gains of 2.37 pounds. They were valued at $8.10 a hundred. Steers in this lot were fed corn silage, dried molasses beet pulp, cottonseed cake, and alfalfa hay. Lot 5, fed sunflower silage, dried molasses beet pulp, cottonseed cake and alfalfa, gained at the rate of 2.09 pounds a day to the steer, and returned a profit of $14.45 a head. They were valued at $8.00 a hundred, making this lot third in profit, average daily gain and in value.

Lot 4, fed sunflower silage, barley, cottonseed cake and alfalfa, stood fourth in profit, making $8.63 and were valued at $7.95 a hundred. They made average daily gains of 1.54 pounds. Lot 3 came next in profit, making an average return of $6.25 to the steer and were valued at $7.75 a hundred. They gained at the rate of 1.89 pounds a steer daily. The feed costs in this lot were higher than in the barley lot, although the amount fed to the hundred pounds of gain was less. This was because corn cost $20 a ton and barley $16.

The poorest lot in the experiment was the one in which sunflower silage, beet molasses, cottonseed cake and alfalfa was the ration. This combination did not seem to work out right and in order to get a marketable finish on these steers corn was added for the last fifty days. They made a profit over cost of feed of $3.10 to the steer, and were valued at $7.45 a hundred.

Dried Beet Pulp Equals Corn.

Learning the value of dried beet pulp fed with silage, cottonseed cake and alfalfa hay in finishing cattle for market was one of the important objects of this feeding test. Finishing with wet pulp hauled from the factories has been followed with good results and has become an established practice, in fact, in this test the wet pulp steers might be considered as a check lot with which to compare the other lots. The steers most closely approaching this lot in the finish and value was the one in which corn silage and dried pulp was substituted for the wet pulp and molasses. Prof. E. J. Maynard pointed out that the result showed that dried pulp could be substituted for corn or other grain as well as wet pulp when fed in connection with silage. Wet pulp feeding is limited to localities close to factories and frequently the demand for pulp exceeds the supply and feeders are unable to carry their cattle through without making a change in feed.

The possibilities of using dried pulp widens the scope of finishing cattle and the results of these tests in showing what can be done with dried pulp was a valuable feature of the experiment. Comparing lots 3 and 5 in which the only difference was that in lot 3 the steers had corn with their sunflower silage, cottonseed cake and alfalfa, and in lot 5 dried beet pulp, Prof. Maynard explained that the results showed dried pulp had a value of 10 per cent higher than the corn. A feeder could thus afford to pay more for dried beet pulp to feed in this sort of a ration than for corn. The dried pulp steers put on 293 pounds in the 140 days of the test, while the corn-fed steers gained 265.2 pounds. The cost of a hundred pounds of gain in the dried pulp lot was $10.33 and in the corn lot $12.43, and the dried pulp steers were valued 25 cents a hundred higher.

The barley-fed lot had this grain in the place of pulp instead of corn, the other feeds being the same. These cattle were valued 10 cents a hundred higher than the corn-fed steers. From the standpoint of efficiency of the ration the barley showed a value of 80 per cent that of corn or in the exact ratio of the cost of the two grains.

Sunflower Silage Hard to Harvest.

Sunflowers as a silage crop cannot successfully compete with corn in the irrigated sections of Colorado. That was plainly shown by the results of this feeding test in which four lots of steers received sunflower silage. From the standpoint of efficiency, or the amount of the different feeds required to produce a hundred pounds of gain, the corn silage lot made gains on 11.5 per cent less silage, 11.7 per cent less dried beet pulp, 11.3 per cent less cottonseed cake, and 37 per cent less alfalfa hay.

The only argument in favor of the sunflower silage is that of tonnage yields. Prof. Maynard explained that this is more than offset by the cost of harvesting the crop and getting it into the silo. Corn binders will not handle sunflowers as they grow under irrigation. They had to be cut and handled by hand. The actual cost of the sunflower silage, considering every item of expense from the interest on land and equipment to getting them through the cutter and into the silo, was found to be $4.16 a ton for the silage used in this test, and for corn silage it was $4.45 a ton. The slight difference in favor of the sunflower silage did not make up its lesser efficiency in the ration.

Sunflowers can be grown in parts of the state where corn is not a successful silage crop and in these sections the growth would not be so rank as to cause difficulty in handling with ordinary corn harvesting machinery. In these sections, Prof. Maynard stated that this crop might well be given consideration as a source of the succulent part of the ration.

Sunflower silage gave the most economical returns where fed in a combination with dried molasses beet pulp, cottonseed cake, and alfalfa hay. Sunflowers have been grown at the experiment station for three years, the average tonnage yield of corn being 10.3 to the acre, and 20.3 tons for the sunflowers. A careful account has been kept of the man-hours, the horse-hours, and the tractor-hours required to handle the two crops in getting the costs in the silo. It is significant that the man-hours are doubled in handling sunflower silage.

Steers Made Heavy Grass Gains.

The cattle used in this test were purchased in April, 1921, and were placed on the experiment station foothill pastures, where some range tests are under way, averaging 685 pounds to the steer. They came in October 24 weighing 1,015 pounds and were carried on beet-tops and beet-top silage until December 3, when they were weighed up and separated into lots of ten steers each of as near equal weight and quality as possible.

The wet pulp was hauled 2.3 miles and was stored in a pit or silo at the station feed yards. It contained somewhat less moisture as fed than the pulp hauled daily from the factory pit, but in calculating the results it was figured to the same moisture content as the factory pulp. The beet molasses, which was fed in two lots, was begun gradually, increasing from a half pound daily to the steer to five pounds at the end of thirty-five days. The maximum amount of molasses fed was eight pounds to the steer daily. The corn silage was of good quality, but contained very little grain.

The cattle were charged into the feed lot at $5.50 a hundred, this price being based on what similar steers were worth on the market. This made them cost around $58 a head. The average weight was 1,055 pounds. The work of feeding and weighing these cattle has been most accurately done, as is necessary in conducting a test which can have any value. Farmers and feeders may not be concerned with the necessary details of getting accurate results, but they do want to know that the results are accurate. Cattle men have been given ample assurance that Prof. Maynard has gone the limit in doing everything possible to get dependable answers to the problems involved in his experimental tests. In weighing the cattle at the end of the test they were shrunk by being weighed in the morning before they had filled up on pulp or silage to avoid crediting a big feed of pulp and silage as gain.

Many Stockmen Study Results.

That farmers and stockmen are realizing the value of the experimental work being done at Fort Collins was evidenced by the large attendance at the Feeders' Day program, April 28, despite the bad condition of the roads. Rain and snow for almost a week steady had made automobile travel almost impossible and the feedlots were so muddy as to daunt any but those intensely interested in seeing these cattle and getting the lessons with their own eyes. A farmer from the Brighton district came early and tramped back and forth from lot to lot and finally made notations as to the relative market value of the different lots. He later found that he had placed the lots in the same order as the stockyards men who appraised them. This illustrates the spirit in which stockmen are accepting the work done for their benefit by the experiment station men. Fully 160 sat down on the open-air bleachers which had been prepared while Prof. Maynard ran out the steers, lot by lot, and pointed out the lessons of the test.

Special Livestock Addresses Given.

In the afternoon an audience of 300 or more gathered in the college auditorium and listened to addresses by John Clay, Hans (Turn to Page 11)

Entrance to livestock department of Colorado Agricultural College, where experimental steers were fed under the direct supervision of Prof. E. J. Maynard, specialist in animal investigations.

Beautiful Mountain Homes and How to Make Them

MATERIALS OF ARTISTIC VALUE AVAILABLE ON EVERY HAND

Gordon Kent.

NO HOME is complete until it is beautiful. Things that are raw, crude, and ugly, are annoying. An ancient sage said: "If a man has two coats, let him sell one and buy a flower." The imagination must be fed as well as the stomach. No man, however hardheaded and practical, should ask his wife to share squalor with him. Ross Crane says: "We are not here to make a living, but to live a life." Life is not full and satisfying without beauty. As disorder is fatal to efficiency, so bare and ugly surroundings are fatal to domestic harmony and happiness. Especially has the child a right to a bower of beauty for a home.

The comfort and stimulus of beauty are especially available to the mountain rancher. In location and accessible materials of the greatest artistic value, Nature plays right into his hands. His very surroundings are picturesque. The rocks on the slopes are occupied by flowering shrubs. Every draw is graced with spruce and fir. Wild flowers grow around him in profusion. Suggestions and materials abound.

Beautifying Home Gradual Process.

One more word of introduction. The beautifying of a homestead or farmstead is a continual process. The limits of energy and money are usually such that we cannot do everything at once, like an oilman who strikes it rich and lets a contract with a builder for a $50,000 house, and another contract with a landscape architect for a $20,000 garden. But we can make a start and year by year as opportunity offers we can add to it in accordance with a well-made plan.

The principles of landscape gardening are simple. Walks should curve and meander, like cow-paths. A line of trees should not be lined and spaced as in a commercial orchard, but irregularly as in nature, with a general trend, not a direct line. Shrubbery should be grouped in masses with the taller ones in the back. A lawn should be as unbroken an expanse as possible, not cut up with formal flower beds. Flower beds and clumps of shrubbery should be kept to the edges and corners of the grounds. Hedges, borders, circles, squares, and straight lines belong to the formal English, or Dutch, style, and are out of place in American country homes. In cities where blocks and lots are laid out in straight rectangular areas, the case is different, and if the space is small the treatment is necessarily formal. In the mountains one's cue should be taken from Nature herself. Copy, or improve, her charming effects. Harmonize with your surroundings. Be part of them.

Lawn Important Feature.

A mixture of Kentucky bluegrass and Dutch clover gives the best lawn. The ground should be well spaded and particularly well raked. Stones of all sizes must be thrown out. The richer the soil is, the more successful the grass and clover will be. The better it is spaded and raked, the more even the surface will remain. My own lawn is somewhat uneven because much of it was filled in and settled. I irrigate it whenever necessary with about eighty feet of two-inch hose. The end is in a brook and the water is carried by gravity. There is no better paying spot on the place. When the chickens were shut up, the lawn kept them supplied with tender grass and clover, and their wants supplied the necessary reminder to mow a little of the lawn every day. If the mower is kept sharp and well oiled, a small boy can run it. A home-made roller will help during the first weeks of the lawn's existence. A three-foot section of a tree trunk with the bark taken off is good enough for anyone, but if it is a small tree with diameter less than sixteen inches, make the roller correspondingly shorter. Firm the lawn with it after the seed is raked in, then when the grass has started iron it out a few times. Seed it down early in May so it will get a little rain and snow to start germination and growth.

Decorate House With Vines.

The walks are really a part of the [illegible]. Flat stones level with the grass [illegible] lawn mower runs on unimpeded, [illegible] the most satisfactory walk. [illegible] walks require more attention to [illegible] them presentable.

The next thing to call for our attention is the house. What we are doing is vegetative decoration, and as we have decorated the ground with a green lawn we will now decorate the house with climbing vines and flowers. The only way we can get acclimated climbers is to borrow from a neighbor who has them. Woodbine is common and any well leaved vine that has been successfully grown will serve perfectly. Tall telephone peas can be grown on trellises of small poles, or poultry netting. Another decorative climber that combines beauty and edibility is the scarlet runner bean. It is luxuriant and gorgeous. Its effectiveness as a house climber is unsurpassed. To wreath a south window, nothing is more cheerful than sweet peas. The tall nasturtiums are also valuable. Solid masses of color and combinations in contrasts can be had by buying the named varieties of sweet peas and nasturtiums. Why plant things in rows and support them with brush when you have fences and bare walls begging to be made ornamental and useful? By clinging, blooming vegetation any house can be transformed.

Transplant Wild Flowers.

The Anemone pushes its blue petals up through the snow in spring. There is Nature's hint. Transplant some, being careful to get the long tap root. Add to it the crocus and snowdrop. Around you in the gulches are colonies of columbines, loot and booty for your garden. Spade up large clumps with plenty of dirt. They will keep right on growing. The seed pods are easily rifled in the fall and you can increase their numbers as you please.

The tiger lily is common throughout the mountains. Also the Mariposa lily. Bring them home and make them welcome. Fairer guests never honored you.

Down by the stream on the shady side of the big spruces, or at the foot of a rock, you will find ferns. Plant them on the north side of the house in the rich, black soil of their choice. These are a few suggestions. Go to Nature for more. In transplanting, match the native conditions as nearly as possible. The wall flowers want a dry soil, the irises you will find in a swamp. Columbines want to be half shaded. Golden glow prefers full sun. Flowers that are not native, should be grown, not from seed, but from two-year-old roots. This applies to hollyhocks, foxgloves, Sweet Williams. However, pansies and Oriental poppies will grow from seed.

Plant Trees and Shrubs.

Now take a look at your place from the road and see where a mass of spruces, or balsams, would look effective as background. Remember they must not be close to the house. They must not obstruct the view. They belong in the margin, not the foreground. They may be planted in an elongated mass to serve as a windbreak, or in a cluster to become some day an ideal playground for somebody's children. If there is a place for them, it will be at the back or on one side, not in front. The silver spruce is the classic among ornamental trees in Colorado. The balsam fir is a close second. The yellow pine is good. The Douglas fir, or red spruce, is good, but the foliage is not dense.

To move a fair sized tree of any kind is quite an undertaking. The dirt around the roots cannot be disturbed without killing the tree. A spruce four feet tall requires to be moved with a clump of dirt intact about two feet each way, and is as large as the landscape men usually tackle. Dig around the trees in the fall, making a trench a foot wide encircling it at fifteen inches from tree. Cut the roots that cross the trench. Leave it until April 1 next spring, filling in the trench with loose trash. In the spring dig out the trash, pry out the ball of dirt while still frozen. Haul it to the new site and plant at same level. Water plentifully as the weather warms. Father Time will take care of the rest. Next time you visit a nursery man, ask him to show you his spruces. He will take you to his cellar and you will see a 3-foot spruce with its ball of dirt carefully done up in burlap and dampened. They are worth $1 a foot. A big spruce growing where it ought to be is in its beauty and dignity priceless. It takes planning, labor and patience to get it there. Trees are not cabbages.

Decorative Shrubs Plentiful.

Shrubbery is not so exacting in these respects. The mountain maple is one effective shrub. At high altitudes the maple does not attain to treehood. It is especially beautiful in the fall, with its crimson bronze and gold foliage. The thimbleberry bears flowers as big as a half dollar. The wild currant has a purple bloom. There is a shrub that grows in the rocks that bears small flowers in clusters resembling those of the white spirea that I have often admired, though I have not attempted to transplant it. The choke-cherry and the elderberry are other attractive shrubs. The wild plum is obtainable in many localities. With these and others there are great decorative possibilities in our gulches and on our slopes.

City men spend thousands of dollars to embellish their houses and grounds with beautiful plants. They import them from Europe and all over the world. Anyone with a mind to produce beauty will find the materials at hand anywhere in the mountains.

Sunflowers Used as Silage Crop

MAKE GOOD YIELDS WHERE CORN CANNOT SUCCESSFULLY BE GROWN.

WHILE the sunflower as a silage crop may not be able to compete with corn in sections where corn can be successfully grown, it is worthy of consideration as a source of succulent feed in regious of high altitude and locations unsuitable for corn. In the northern part of the country and in the higher altitudes of the Rocky Mountain region the yields of sunflower silage are regularly larger than those of corn or other silage crops. The composition of the silage compares favorably with that of corn, and most feeding tests indicate that it is equal to corn silage in milk production. In Montana it has been fed to beef cattle, breeding ewes and brood sows with good results.

Feeding tests have been conducted with sunflowers as a soiling crop for dairy cows and the results have been fairly satisfactory. The principal objection is that they must be run through a cutter before being fed.

Although the sunflower is native to this country and was one of the food plants of the Indians, it was not much used by the early settlers, and only in comparatively recent years has it become a well known crop. Three important seed-producing sections—southeastern Missouri, southern Illinois, and the San Joaquin Valley of California—produced nearly 10,000,000 pounds of seed in 1920.

Sunflower Silage New Development.

The most recent development and the one that promises to add most to the popularity of the crop is the use of the plant for making silage. A recent bulletin, No. 7045, "The Sunflower as a Silage Crop," by H. N. Vinall of the United States Department of Agriculture, contains all the important information that has been accumulated on that subject, and in addition outlines the history of the plant and its use for other purposes.

At present sunflowers are grown from the southern provinces of Canada to the Canal Zone. They are also found in most parts of South America, but more especially on the west coast from Colombia to Chile. They are grown to a limited extent in Australia, New Zealand, South Africa, Egypt, the Mediterranean region of Europe, India and China. They have reached their highest development and greatest usefulness in Russia. Next to Russia, Hungary is probably the greatest producer.

Cannot Replace Corn.

In the United States the value of sunflowers for silage depends more upon the success with other silage plants than on the adaptability to local climatic conditions. Thus, it is doubtful whether sunflowers will ever be popular for silage in the central or southern Great Plains, because the sorghums do well there, or in the corn belt, because corn makes a good silage crop. In the southeastern states corn, sorghum, Japanese cane, pearl millet, and other silage crops are well adapted, and sunflowers are not likely to compete successfully with them.

In the extreme northern part of the United States or at high altitudes in the western states the sunflower is recognized as a valuable crop for silage. Since the value of this silage has been demonstrated by experiment, it is probable that its use will increase also in New England, northern New York, Michigan, Wisconsin, Minnesota, North Dakota, Montana, Washington and Oregan, and in some of the high valleys of the Rocky Mountain region.

Sunflowers Frost Resistant.

In resistance to frost sunflowers are much superior to corn. An observer in Michigan says that they will "push back the frost line three weeks" in that state. This accounts for their value in high latitudes and altitudes. It was once thought that they would be valuable as a silage crop in dry regions, but this has not proved to be the case. The sorghums give much better yields.

The principal variety now grown in this country for silage is the Mammoth Russian. It usually has a single stalk with comparatively few branches and one head six to twelve inches in diameter. The common wild sunflower of the United States has a much-branched stalk with numerous heads three to four inches in diameter and the yields when grown for silage are usually less than those produced by the Russian variety.

Requirements Similar to Corn.

In growing the crop for silage it is necessary to plant more thickly than when it is to be grown for seed production. The same soil preparation as is given for corn will be suitable for sunflowers. Cultivation also is much the same as for corn, but the young plants often grow so rapidly and shade the ground so completely that weeds do not grow well and not so many cultivations are necessary for corn. Ordinarily two or three cultivations are necessary.

The methods used in harvesting for the silo are much the same as with corn. If harvested later than the blooming stage the quality of the silage will usually be inferior. If the stalks are dry it will be necessary to add water. Stronger silos are necessary, as sunflowers pack more solidly. A silo that will hold 200 tons of corn silage will hold nearly 300 tons of sunflower silage.

Liming Soil Often Beneficial.

A great deal of interest is being taken in the matter of liming soil. Many soils need lime. The cheapest form in which to apply this is as ground limestone. If you do not know whether your soil really needs lime or not, you can easily test it by liming a few square rods. Twenty-five pounds of ground limestone spread on a square rod is at the rate of two tons to the acre. Liming a square rod here and there on various parts of the farm will give a fair idea as to the advantage which may come from spreading lime in a larger way. If these tests show that the soil really needs lime, plans can be made to spread it over the whole field. In the same way fertilizer tests can be made. The co-operative tests of this kind under the direction of our experiment station are of great value.

How to Make Profitable Income on Plains Farm

FARMING WITH LIVESTOCK ESSENTIAL TO SUCCESS OF SETTLER

E. R. Parsons.

FARMERS in the plains regions growing crops from the normal precipitation frequently are reported as having hard times and some are even quitting for good. Of course, this happens in every business, or industry, and is to be expected. Those who seem to have the most trouble are the farmers who have settled on the thin, sandy lands that blow. These lands were the last to be homesteaded for the reason that the good, hard lands had already been appropriated. There seems to be no complaint from those who farm the latter, but the farmers on the sandy soil say that it is almost impossible to raise cash crops, although they can produce feed for stock.

Government Policy at Fault.

It is to be regretted that when these lands were first taken, the government took no particular stock in farming, and therefore took no measures to help put it on a secure basis. The farms are too small and there is not sufficient range for cattle. For diversified farming, farming with stock, is the salvation of the settler on this kind of land, and if the homesteads had been twice the size and reservations made for free cattle ranges, the farmers would have had a much better chance of making good. We read that the farmers around Pawnee have been endeavoring to have their assessments reduced by one-half. This would be fair enough, for these lands, as far as crop production is concerned, are worth only about half as much as those outside the sandy belt where soil blowing is the chief drawback. It is our opinion that instead of taxing these men who have the courage to settle and develop these lands, the Government should give them a bonus.

Some of the farmers from these districts complained that although they had been farming for several years, they had never been able to raise a good crop. The best crops to plant are fall rye, barley and sweet clover. Plowing under green crops will add humus to the soil and help prevent blowing. In cutting grain, plenty of stubble should be left to plow under and trees should be planted wherever possible.

Feed Crops to Stock.

We have always recommended diversified farming for the plains farmer. Although marketable crops can be raised and are raised on the right soil and with the right methods, it is much safer to feed everything on the ranch to stock, for whether a crop matures or not it can always be cut and put in the silo or stacked for feed. It is also more profitable to use up everything on the ranch and sell concentrated products than to sell crops which have to be hauled to market. Another point which is most important is that when a crop is marketed, it is a dead loss as far as the soil is concerned, but when it is fed to animals enough of it can be returned every year to keep up the soil to almost its original strength.

In the matter of livestock, we must not forget that chickens play an important part in the economy of the dry farm. A hundred laying hens will pay the grocery bill for a small family. Two hundred will do the same for a large family, besides supplying the table. Nearly all the feed can be raised on the farm and all that need be purchased on the outside is a little bran or shorts for the mash, which can be made with sour milk or buttermilk. There is also the fertilizer to be considered. Five hundred hens produce a sack of this every day, and twenty sacks will fertilize an acre, which means that one acre can be improved so as to yield better crops every twenty days, and 250 hens can do the same in forty days. If purebred stock is kept, quite an income can be obtained from eggs for hatching; a little judicious advertising is all that is necessary.

Hogs for Home Meat.

Should the plains farmer keep hogs? Of course—at all events he should keep enough for family use, and if he has cows and milk to spare, he can increase the number accordingly. It often pays to keep a good brood sow and sell little pigs. Here we come again to the factor of blooded stock. It always pays to keep the best and get the best price for your stock. It costs more at first, but the farmer can begin in a small way and soon build up.

The income from hogs can be nearly doubled by the owner curing his own meat, instead of selling on the hoof. It is an easy business and can be done during the winter. When the pork goes into the smokehouse it is worth 10 cents to 20 cents a pound; and when it comes out it is worth from 30 to 40 cents. This is worth pondering over. A neighbor of ours in Colorado cured all his own meat and obtained fancy prices for it. He then started buying from his neighbors as well, and at last accounts was making a good income from it. It is a fact that ranch-cured hams and bacon are just as popular with the city folks as home-made bread. An advertisement will always let them know. Money is often lost, especially by farmers, from being backwards about advertising when they have something good to sell. The difference between packing-house meat and that cured on the farm is very noticeable, because the former has to be salted to the limit in order to keep indefintely under any and all conditions.

Milk a Few Cows.

The greater part of the income from the diversified plains farm is usually that derived from milking cows of the right kind, but when they are not of the right kind they are often the cause of a deficit rather than a profit. There are hundreds of farmers feeding cows at a loss, but they do not know it because they do not keep books and cannot imagine what is the matter with the ranch. What sense is there in feeding a cow from $10 to $15 worth of feed a month which returns to the owner only about $5 worth of butter? This kind of a cow is more common than we might imagine.

Suppose a man has a herd of these income absorbers. What can he do about it? Fatten them up as well as he can and send them to the stockyards. Then for every two that he sells, let him buy one good cow and the deficit will turn into a profit. As a rule, we think too much of numbers and not enough of quality, and in our agriculture we consider a large acreage badly plowed better than a smaller one properly worked, which will yield twice as much. It is a common mistake to keep too much stock on the ranch and then have to buy feed for it. It is also poor policy to stock up a new ranch before finding out what can be raised on it.

In the matter of crops, we must consider the matter of soil. Those that usually will do the best in very light soils are fall rye, barley, sweet clover and Australian and other flint varieties of corn. If the corn does not ear well, it is better not to try it for grain, but to plant it thickly for fodder. Sudan grass has been known to make fair crops in some varieties of sandy soil and it is always worth trying. The same may be said of amber cane.

Must Conserve Moisture.

As we have often explained before, the lighter the soil, the more water is required to make a crop. Therefore, to make a good start the first thing to do is to plow as deeply as possible and prepare for summer fallow, which, if plowed in the spring and kept clear of weeds, will accumulate considerable moisture by August. Early in that month it should be planted to fall rye, using about thirty pounds to the acre. By the end of September it should have covered the ground sufficiently to prevent blowing and will make late fall pasture for young stock. Rye on summer fallow often grows five feet high and, if cut soon after the blossoming period, makes good hay and will often yield a small second cutting. As soon as the rye is in, fall plowing should commence for spring planting. The more plowing, or listing, the farmer does in the fall, the more crops he will get from his spring planting. The listing, or plowing, should be as near ten inches deep as possible and always across the path of the wind. It should be left rough until the frost is out of the ground in the spring, when it should be harrowed down to prevent loss by evaporation. On this fall plowed land he can plant in the spring barley, sweet clover and corn and cane for grain and fodder. If he does any spring plowing in March or the first part of April, it can be planted to corn, cane or Sudan grass in June, but not to small grain. Any plowing done after this should be left for summer fallow.

How to Use Crops.

The fall rye, if it does well, will make a reserve of hay for winter. If some of it is allowed to (Turn to Page 11)

Market Outlook for Farm and Ranch Products

COW DEMAND INDICATES RETURNING CONFIDENCE IN BEEF MAKING

Edited by Glenn G. Hayes.

ALL classes of dressed meats advanced sharply at eastern markets in the last ten days and furnished the principal motive in the trend of livestock prices. The post-Lenten appetite for meat is more keen and the effect of rather light slaughter in preceding weeks also was a factor. Dressed beef advanced 50 cents to $1; pork loins, $2 to $2.50; lambs, $1 to 3, and mutton, $4 to $5 per 100 pounds. Veal ranged from steady to $3 higher at various markets. The arrival of about 300,000 pounds of chilled and frozen beef from Argentina caused only a temporary flurry. Some frozen Argentine and New Zealand lambs are being offered in the east, but they do not suit the trade and are moving slowly.

Healthy Tone in Cattle Trade.

With beef trade channels open, local slaughterers and eastern shippers have been active competitors for a moderately larger supply of cattle on Middle Western markets. In addition, export orders have been filled at Chicago and Missouri river points so that a decidedly healthy undertone was manifest in the trade. Yearlings showed more strength than mature cattle. There is a possibility of a moderate excess in the supply of weighty steers to come forward in the next six weeks, but it will be much less marked than usual this season because most feeders took out light steers last fall.

The number of steers on feed is not above normal, but it is large enough to prevent any sign of beef scarcity. An exceptional demand for beef in the next month or two cannot be counted upon with certainty. Nevertheless, an advance of 50 cents per 100 pounds in prices on the hoof is quite possible and much more probable than a decline of an equal amount.

Cows and heifers staged a runaway market at Chicago last week because of scarcity and a marked increase in the demand. Calves were less abundant than they have been for several weeks, and resumption of shipping orders at Chicago assisted in an upturn of 25 to 50 cents. The calf market should do better right along.

Stock Cattle Scarce.

Broader interest in stocker and feeder cattle last week again made the scarcity of desirable kinds conspicuous. Prices were at the highest level of the year and perilously close to fat steer values on the better grades. The grass season is beginning in earnest so that purchases of stockers increased while the robust fat cattle market gave courage to the specialists who handle fleshy feeders.

The movement from Texas to Kansas and Oklahoma pastures is officially estimated at less than last year, making the third season in succession it has decreased. Cows are scarce everywhere and the desire for them is almost equally universal as cattle breeding and rearing looks attractive once more.

Hog Run Increases.

The usual May increase in receipts of hogs is showing up and prices have been lowered slightly. Prices on far western markets are considerably above the level in the cornbelt, storage stocks are below the average, and demand for pork appears to be reviving. The run may increase 10 per cent more before the middle of June, but underlying conditions are sound enough to prevent prices from declining very much below the present level.

There is the keenest of competition for the small available supply of stock pigs.

Another Spurt in Lamb Market.

Lamb prices developed another burst of speed last week and sold at a new high on shorn stock and equaled the former high point on wooled lambs. California spring lambs are arriving right along and have sold at irregular prices ranging from $15.50 to $17.35 at Chicago. Receipts will be rather uncertain for the next thirty days, but there are not enough fed lambs and Californias to overdo the market before Kentucky and Tennessee lambs become abundant in June.

Europe Continues to Buy Wheat.

Persistent buying of wheat in North America has been the dominant feature in the grain market recently. Continental countries have bought new crop winter wheat for July, August and September shipment via Montreal and the Gulf. It is estimated that these sales now total 30,000,00 bushels, with every indication that they will continue right along and may amount to 75,000,000 bushels or more by (Turn to Page 16)

Recent Range of Livestock Prices at Our Principal Markets.

Cattle—	Denver.	Kansas City.	Omaha.
Choice and prime heavy steers (1100 lb. up)	.....	$8.40@ 9.10	$8.25@ 8.65
Good heavy steers	7.50@ 8.00	7.90@ 8.60	7.75@ 8.25
Common heavy steers	6.00@ 7.25	6.75@ 7.70	6.50@ 7.35
Good light steers	7.50@ 7.75	7.90@ 8.60	7.75@ 8.25
Common light steers	6.00@ 7.15	6.50@ 7.70	6.50@ 7.25
Common to choice butcher heifers	4.75@ 7.50	5.25@ 8.00	5.00@ 7.65
Common to choice butcher cows	4.00@ 6.50	4.50@ 6.85	4.50@ 6.75
Bologna and beef bulls	3.00@ 4.50	3.40@ 5.75	3.50@ 5.50
Canners and cutters, cows and heifers	2.25@ 4.25	2.75@ 4.75	3.00@ 4.50
Canner Steers	3.00@ 4.00	3.50@ 4.75	3.50@ 4.50
Common to choice feeders (1000 lb. up)	5.50@ 7.00	6.10@ 8.00	5.75@ 8.00
Common to choice stocker steers	5.00@ 7.50	5.50@ 8.25	5.25@ 8.00
Common to choice stocker cows and heifers	3.50@ 6.00	3.85@ 6.50	4.25@ 6.25
Hogs—			
Top of Market	$ 10.05	$ 10.35	$ 10.15
Bulk of Sales	9.55@10.00	9.85@10.35	9.60@10.10
Heavy (250 lb. up)	9.25@ 9.75	9.85@10.25	9.65@10.10
Medium (200—250 lbs.)	9.75@10.05	9.95@10.35	9.70@10.15
Light (150—200 lb.)	9.75@10.05	9.75@10.35	9.85@10.15
Smooth packing sows (250 lb. up)	8.25@ 8.75	8.65@ 9.00	9.00@ 9.75
Stock pigs	8.25@ 8.75	9.60@10.50	9.50@10.00

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6 months, $3.50; 1 year, $7.00
TIMES—Daily without Sunday—
6 months, $2.40; 1 year, $4.75

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Readers are invited to make generous use of this department. Questions regarding any branch of farming, livestock production, animal diseases, legal matters pertaining to the farm, homestead inquiries and the like cheerfully and promptly answered by letter and through the magazine. Address all communications to SERVICE BUREAU, WESTERN FARM LIFE, Denver, Colorado.

Inquiries Answered by Mail.

All inquiries are answered by mail as soon as possible after they are received. Only those of more or less general interest are printed in the paper. We must have the full name and address of those submitting questions. Your inquiry may be of such a nature as to be of no interest to others, but you will receive a reply just the same, but we cannot do this without your name and address. We have made the general rule that unsigned communications will not be given consideration. We do not print your name and address in the paper, but ask that you sign your letters as an evidence of good faith. If you have sent us unsigned letters and have received no reply to your questions, the foregoing will explain the reason.

Advises Against Cow Peas.

What is your experience with cow peas on unirrigated land? What variety would be best for the northeast part of Weld county, Colo.? Can you suggest any other source of legume hay for milk cows outside of sweet clover and alfalfa? —C. D. M., Weld county, Colo.

Cow peas are not a reliable crop on the upland farm in your section. They are one of those crops which, in the right soil, in a favorable season and a suitable location, may sometimes yield heavily, but in a general way the growth, when broadcasted, is seldom higher than that of Mexican beans. When planted in rows and cultivated they do better, but are seldom worth while.

Canada peas also are a doubtful crop, for if the hot weather comes on suddenly and early, their growth stops at once.

For a leguminous crop there is nothing better to rely on than sweet clover or alfalfa. They also improve the soil and send tap roots deep into the subsoil, which, when they decay, form humus and leave holes for the water to enter.

We know of no other heavy cropping legume, except the velvet bean, which will grow to perfection only in the South.—E. R. Parsons.

Cultivation of Potatoes.

We are planting five acres of land which was plowed last May and summer tilled all last season, to certified Bliss Triumph potatoes. Is there any danger in plowing ten or twelve inches deep if it is well packed? Many preach shallow cultivation of potatoes on unirrigated land. Do you so advise in case we have a good supply of moisture?—W. E. F., Weld county, Colo.

This plowing should have been done as soon as the frost was out of the ground, harrowed immediately and then packed thoroughly. Our experience in cultivation is that the deeper it is the less the loss from evaporation. There is an erroneous idea that deep cultivation destroys roots, but the fact is the roots do not form in the mulch, but go deeper where we want them. Shallow cultivation goes necessarily with shallow plowing, for if the mulch is deep there will be little or no top soil left for the roots. There is no danger of cutting out potatoes with the cultivator if you watch the foliage, for the tubers seldom extend out into the interspace beyond the leaves.—E. R. Parsons.

Feeding Value of Speltz.

How does speltz compare with oats or barley as a feed? I would like a grain that yields well under semi-arid conditions and is a good all-round feed grain for milk cows, hogs, horses and chickens. I have raised oats, but my opinion is that oats are good for horses but not for hogs or milk cows.—P. L., Logan county, Colo.

The grain commonly called speltz is really emmer. Of the three grains you mention—barley, oats and emmer, oats contains the largest total amount of digestible nutrients, this being largely because oats contain almost 4 per cent digestible fat and the other two grains less than 2 per cent. They are very nearly equal in the protein they contain. As an all around feed grain suitable for growing under the limited rainfall conditions of the plains regions, barley is generally considered the best of the three. Speltz, or emmer, contains a large amount of hull and is not relished by hogs. Of the six-row types of barley, the California, or Coast, is one of the best yielding varieties. Of the bald, or hull-less varieties of barley, what is properly called Nepal is recommended as the best for growing under semi-arid conditions. This variety is better for barley hay and for hogging down than the California, but does not yield quite so heavily. Barley, of course, should be sown as early as possible in order to take advantage of the early spring moisture. Either barley, or speltz, must be ground in order to get the best results in feeding.—G. C. W.

Damage From Jacks at Large.

A herd of jacks and jennets have been allowed to run at large for the past two or three years. They have become a public nuisance and a menace to other stock under fence. No fence seems to hold them out of growing crops. Could not something be done to make the owner keep them up? We have tried to reason with him, but he claims the unfenced land is free range. Is it lawful to permit jacks to run at large?—M. T. O., Washington county, Colo.

You have to fence out stock. If the stock breaks a lawful fence you may get damages from the owner. Inferior jacks are not permitted to run at large. —J. Hamlet Barry, Equitable Building, Denver.

Pumping Water for Irrigation.

Water has been so short for my farm that I have raised only about one-fourth of a crop the past two years. My plan had been to raise alfalfa and corn and convert these crops all into pork, as that would be the most compact way to market them. We are a long ways from a market. I can get water from the river with a six-foot lift, but it would take about an eight-inch centrifugal pump and that would require a larger engine than I need for my other work. I have heard that a pump was on the market which would do the work with about a nine-horse power engine. That is about the size I need for other purposes. Can you help me find such an engine?—M. L. N., Utah.

The irrigation engineers of the Reclamation Service state that an eight-inch centrifugal pump of standard type will handle water under a ten-foot head with a nine or ten horse engine, in fact that is more power than is actually used. They do not know of any other pump more satisfactory for your purpose than the centrifugal.—G. C. W.

Wife's Name on Note.

A man who lives in town and owns town property and several farms, borrowed money of me. His wife also owns town property in her own name. I asked for his wife's name on the note and he claims it will do no good, for they live in town and not on the farm where the mortgage is. I would like information on this point.—C. E. P., Phillips county, Colo.

The wife's name would not be of any value on the note unless she owns some property. But if she owns property and is responsible her name on the paper would make it a great deal better.—J. Hamlet Barry, Equitable Building, Denver.

Fall Plowing for Beans.

I have 25 acres to plant for beans between May 10 and May 20. This ground is rather sandy. I expect to harrow, as it is plowed, and plant with furrow openers about June 1. How deep would you advise me to plow this ground? I have been plowing my sod nine inches deep. —J. B. H., Adams county, Colo.

In plains, or unirrigated, farming we do not advise plowing in May and planting right away. This is one of the main causes of small crops. The bean raisers who do this raise from 400 to 500 pounds per acre, which hardly pays for their labor. The land for beans should be plowed as deeply as possible in the fall and then worked over, not necessarily very deep, in the spring before planting. This will give you a paying crop. The biggest crops have been raised on the summer fallow. The land was plowed deep in May or June and held over until the next season. When it is necessary to plant anything on spring plowing, it should be corn or sorghum on land plowed not later than March. The main idea in farming on a limited rainfall is to plow deep and always ahead of time, so as to allow the ground to settle and fill up with moisture before planting. The sod that you have plowed nine inches deep will raise fine crops as soon as it has settled and bottled up a few showers.—E. R. Parsons.

Sudan grass will furnish pasture for cows at a season when native grass pasture is likely to be dried up.

Substitutes for Winter Wheat.

"On the non-irrigated farms of the plains regions there is really no good substitute for winter wheat," says Professor Alvin Kezer, Agronomist of Colorado Agricultural college. A certain percentage of winter wheat blows out every season and many plains farmers are asking for information as to the best crops to plant on these fields. Professor Kezer points out that spring wheat is so uncertain that it is more or less of a gamble on land where winter wheat has failed. It does not take any more moisture to grow spring wheat than it does winter wheat, but the winter wheat matures before the hot season comes on. Spring wheat usually is heading out in the hottest and dryest part of the summer and for this reason is inferior to winter wheat on the plains farm. He urges the summer fallow for fall planting of wheat as the best thing to do on land where the wheat has failed.

Professor Kezer suggests that corn can be put in for forage or grain and be more likely to make a crop in the northern half of the plains regions than almost anything else we can plant. Some of the land might be planted to cane or Sudan for hay. "It might also pay to put out a small acreage of beans," says Professor Kezer.

"It may pay to leave same of the land idle until time to plant in winter wheat next fall simply because there is no good cash crop, for some of the regions, to replace winter wheat. If such land is left it could be kept free of weeds by middle breaking with a lister. It can be middle broken this spring and again in July. Later it can be leveled down to a seed bed and planted to fall wheat by the middle of September.

"For feed grain to supplement corn, barley offers a fair chance. As a cash crop none of these are good substitutes for winter wheat because prices for these crops are usually low. They can be marketed, however, through livestock if the farmer has a small herd. To put out spring wheat on such lands is to gamble with fate. The land might be better left and properly prepared for seeding in the fall to winter wheat."

Beet Sugar Yield Decreased.

Final report of a beet-sugar production of 1,020,489 short tons in this country in 1921, is announced by the United States Department of Agriculture. This is 68,523 tons less than the production of 1920, which was a record one and was the first to pass the million-ton mark. The sugar-beet crop of 1921 grew on 814,988 acres, an area that was 56,688 acres less than that of 1920. This report is the result of enumeration and not of estimating.

Farmers received $49,154,000 for the 7,782,000 tons of sugar beets of the crop of 1921, which afforded an average of $60 per acre and $6.32 per ton. The price per ton was nearly as low as in 1916. From $6.12 per ton in that year the price rose to $11.74 in 1919, slightly declined to $11.63 in 1920, and fell 46 per cent in 1921 to $6.32.

In the beet-sugar campaign of 1921, 92 factories were in operation for 76 days on the average. The fraction of sucrose actually extracted by factories was 13.76 per cent of the weight of beets, as compared with an average of 13.55 per cent for the six years 1915-1920.

Land Exchange in Forests.

Privately owned land within the exterior boundaries of the National Forests may be exchanged for National Forest land of equal value or for timber within a National Forest. The Act of Congress making this possible was signed by the President of the United States, March 20, 1922.

Timber secured in this manner will be cut under the regulations of the Secretary of Agriculture the same as timber purchased in the usual way.

This legislation is nearly as important as that creating the Forest Service and will result in a more economical administration and further development of the National Forests. Scattered tracts of privately owned lands within the forests, in many cases, have interfered with the proper administration of the forests.

Crusting of Magnesia Soil.

Farmers with a slight mixture of magnesia in their soil must watch closely for the crust likely to form. As a result of the cementing quality of magnesia this kind of soil seems to crust with the slightest shower and this may be fatal to the tender stem trying to push through. This crust may form following a light shower and be so thin as to escape notice. Using a common harrow will to some extent disturb the rooting of the tender sprouts. I would advise a home-made harrow made of old fence posts with barb wire nailed underneath to posts about three feet long and sixteen inches apart, coupled together in sections in the usual way. If the posts are longer than three feet the drag will have a tendency to push dirt on ridges as well as miss hollows. This is not a heavy drag. It may not work on rough seed beds. Some farmers advocate a rough seed bed to catch moisture and stop soil drifting, but there are better ways of accomplishing this than by having a poor seed bed.—Ered Larson, Wyoming.

Government Book on Radio.

So great has been the interest in the radio telephone that the government has published a book for the special benefit of the radio enthusiasts, entitled "The Principles Underlying Radio Communication." This has been prepared by the bureau of standards. The book contains 619 pages and the price is $1 at the Government Printing Office, Washington, D. C.

Improving Quality of Wool.

The New Mexico Wool Growers' Association has petitioned the state legislature to make an appropriation for the erection and operation of a miniature wool scouring plant at the New Mexico College of Agriculture and Mechanic Arts. The Wool Growers' Association wants this scouring plant erected in order that the grower may send a sample of his wool and get a report on its grade and per cent of shrinkage.

New Mexico ranks fourth in the number of sheep in the United States, according to the Bureau of Crop Estimates report for January, 1922, but ranked ninth in wool production for 1921. The Wool Growers' Association feels that their policy of improving the industry should include an attempt to improve the quality and amount of the wool clip. The production of wool and mutton will always be one of the important industries of the state because of the large amount of grazing lands on which sheep are carried.

The proposed scouring plant will be used as a laboratory in which students will learn something of the up-to-date methods of handling and processing wool. With a considerable number of students taking the course and carrying this information thus secured back to the ranches and with the co-operation of the Wool Growers' Association, the quantity and quality of wool produced in New Mexico can be materially increased.

Government Bulletin of Interest.

The following list of Government bulletins for April will be of interest to many of our readers: Farmers' Bulletin 181, Pruning; 474, Use of Paint on the Farm; 609, Bird Houses and How to Build Them; 739, Cutworms—Control in Corn and Other Crops; 896, Rats and Mice; 932, Rodent Pests on the Farm; 959, The Spotted Garden Slug; 1045, Laying Out Field for Tractor Plowing; 1085, Hog Lice and Hog Mange; 1096, Frost and the Prevention of Damage From It; 1109, Preserving Eggs; 1134, Castrating and Docking Lambs.

Double Trouble.

Levitsky had given his son a severe thrashing for disobedience. As the boy stood in tears, the father said:

"Now, what you t'ink of that, huh?"

No answer. So Levitsky went on:

"I know what you t'ink. You t'ink 'Damn!' Just for that I give you another licking. I teach you!"

First to establish the $10.90 price—"Usco"

THE makers of U.S. Tires made this announcement last November—

"Hereafter the price of the 30 x 3½ 'Usco' is $10.90."

The lowest price ever quoted on a tire of *quality reputation* and *standard performance.*

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With so many tires rushing into this $10.90 price field (now that the season promises business from the American car-owner), it is worth remembering that "Usco" showed its *good faith* by announcing this price *last fall.*

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Farmers' Union Legislative Program.

A movement to reapportion the state of Colorado in order to give the agricultural counties the representation to which they are entitled in the legislature is now under way. This movement is largely sponsored by the Farmers' Union of the state and other organizations and farmers outside any farmer organization are falling in line. The manner in which the sparsely settled mountain districts dominate and control legislation might be illustrated by reference to the fact that fourteen counties in these districts with a total population of 43,000 have fifteen representatives, while Weld county with 53,000 population, has but two.

The farming population is justified in its demand for a more equitable representation and this proposed plank in the Farmers' Union legislative program should have the support of every farmer in the state, whether a member or not. Another important plank in the Farmers' Union program is that relating to a real co-operative law for Colorado. Kansas, Missouri, Nebraska and other states have such laws drawn up in the interests of farmers who wish to co-operatively market their own products. Enactment of a state income tax is another plank in the union program.

Going After Purebred Sires.

The movement for eliminating the unregistered scrub sire from the herds of El Paso county is evidently beginning to bear fruit. Several El Paso county farmers drove to Elbert through the mud and rain to attend the Elbert county association sale and were very much disappointed when the sale was postponed a week. They explained that several communities in that county were contending for the honors and the prizes offered for replacing scrubs with good registered sires. These men evidently came back when the sale was held a week later, for of the twenty-three bulls sold, seven went to buyers from El Paso county.

In a country naturally adapted to livestock production nothing in the farming practices followed has a greater influence in retarding progress and community building than the use of inferior scrub sires for breeding purposes. It is a commonly observed fact that bringing a good, well bred, registered bull to a farm has a stimulating influence which resulted in improvements in apparently unrelated features of the farm equipment and practices.

In El Paso county the livestock improvement campaign is widening its scope as is evidenced by the changing of the eastern El Paso County Purebred Livestock association to a county-wide organization in which every man in the county interested in livestock improvement is eligible to membership.

One of the plans for promoting the idea of better [illegible] is the tour of livestock farms of the county to be held June 10, covering the eastern part of the [illegible].

Must Give Training for Co-Operation.

Co-operation in the conduct of farm affairs and particularly in the marketing of agricultural products is absolutely sound in theory and we have but to turn to the agricultural history and development of Denmark to be convinced of its practical workability. As we look over the history of co-operative effort in this country, however, we see many failures, and it sometimes seems that we are making but poor progress in putting true co-operation into practice. Probably no one thing has hindered the successful working out of co-operative effort more than lack of trained leaders. Education in the fundamentals of co-operative effort is necessary all along the line and such organizations as the Grange, Farmers' Union, Equity Union and others, have done much to develop the spirit and knowledge of co-operation among their members.

We need, however, more specially trained leaders and a most promising recent development in this direction is the establishment of fellowships in co-operative marketing at a number of state agricultural colleges. The first series of these fellowships will be awarded to graduate students who wish to specialize in co-operative marketing of dairy products, and will be established at the state colleges of Iowa, Illinois, Wisconsin, Minnesota, New York, Michigan and Ohio. It is the plan to establish fellowships in grain and livestock marketing also. This movement is being financed by the American Farm Bureau Federation, comprising in its membership individuals from all farm organizations.

In practically every co-operative enterprise it has been necessary to go into the ranks of ordinary corporation enterprises to hire men as managers trained along the desired business lines. These men have lived their lives in an environment of thought foreign to co-operative methods, in other words, no matter how well they may understand the business they are not true co-operators. We must have trained men who have had a long background of experience in the theory and practice of co-operation. Such men are not to be found in sufficient numbers at the present time.

Treat Seed Potatoes by Quick Method.

Lack of time is frequently given as a reason, or rather excuse, for not doing some of the necessary things in connection with farming operations. We are ever on a search for short cuts. Time is a factor entering into many of the preventative methods of controlling plant diseases. When scab and other potato diseases became prevalent growers were finally given the corrosive treatment as a result of careful experimentation. But the process required two hours to complete for each batch of the seed potatoes. Now comes a quick method which is being demonstrated, taking but two minutes to destroy the spores of exterior diseases. It consists in using a hot formaldehyde solution, which must be kept at a temperature between 118 and 122 degrees. A feed cooker or similar device is used for maintaining the proper temperature. The sacks of potatoes are placed in the solution, left for two minutes, and another batch put in and so on until all are treated. County agents in potato growing sections are giving demonstrations of this method. Be sure to get the necessary details as to strength of solution and other important points in this method of seed treatment before attempting to follow it.

Agricultural College to Teach Radio.

Colorado Agricultural college is keeping right up with the times in its effort to be of service to the people of the state. It could not ignore the popular demand for instruction in simple, concise form on the operation and installation of radio outfits. The radio telephone finds its greatest appeal in connection with rural life. The Agricultural college has made arrangements to give both elementary and advanced courses in the subject at the coming summer school. The institution is to be commended for its quick response to the demand for instruction in this most popular and practical subject.

An important link in putting co-operative marketing a step in advance is the recent decision of the supreme court upholding the constitutionality of the Packers and Stockyards Control Act in its jurisdiction over commission men. Chicago livestock commission firms sought to evade this supervision of the Secretary of Agriculture. Co-operative livestock commission firms seeking to do business will not have to fear the unfair competition such as was attempted at St. Louis in the boycotting of the farmer firms handling stock at that market.

College Cattle on Denver Market.

Unusual interest was shown in the marketing of the experiment station cattle from Fort Collins. The final test of a finished steer is the quality and percentage of dressed beef on the hooks in the packing house. The packer buyer holds his job through his ability to see under the hide and know what the animal will look like on the hook. It is pounds of salable beef he is buying and not pounds of live weight.

In order to get all the information possible on these experimental steers they were followed into the coolers by lots and experts graded each lot on the basis of beef, as the carcasses hung on the hooks. The judgment of the buyer and the men who appraised the steers at the feedlots in Fort Collins was borne out to a marked degree in the grading of the carcasses. From the dressed carcass standpoint only one change was made. Lot 5, fed sunflower silage, dried molasses beet pulp, cottonseed cake and alfalfa, was given the top place as finished carcasses. This lot stood third at the feedlots and also third as they were priced by the man who bought the cattle for Armour & Company. They dressed out 63 per cent, or only .7 less than the wet pulp cattle which were graded second on the hooks. The rest of the placing was the same as on foot. The steers in Lot 1 were, if anything, a little fatter than the steers in the lot producing the top carcasses, in fact that perhaps was the deciding factor, for they were not quite so smooth and a little more wasty.

An outstanding lesson of a test of this kind is that beef of high quality can be made from feeds of the kind used. It is nothing new, for the British feeders have long made their beef from a similar system of finishing. The finishing of steers by shoveling the corn to them, as was so long the method in the Middle Central states, is by no means the only way to make quality beef. Steer feeding is a natural adjunct to growing sugar beets. Cattle feeding is not merely a speculative business to be followed in an extensive way by men who can risk large capital, but a regular system whereby the farmer can turn into cash the wastes of farming that could find a market in no other form. The ideal condition would be to have a few cattle fed by a large number of farmers having the by-products rather than to have the same number fed by a few speculative feeders. Farmers of this class are the ones to whom this experimental work is of the greatest value. They cannot afford to experiment or take long chances in getting their feed into marketable form. They need just the kind of information that is being dug out in these experimental feeding tests.

Plan for Planting Trees Next Year.

There never can be real homes on the plains of eastern Colorado and in other plains areas until houses and buildings are surrounded with trees and shrubs to form shelter belts and windbreaks and add to the beauty and comfort of the surroundings. Mr. Parsons and others of long experience who have thought deeply on this subject of making a plains country into settled communities of contented farm families never miss an opportunity to point out this fact. But it takes forethought and planning to successfully grow trees under plains conditions. Success is absolutely dependent on the accumulation of a reserve of moisture to give the trees a proper start and then such care as will insure their getting down about their roots all the moisture which falls through the year. "Trees are being planted this year," said Dr. V. T. Cooke of Strasburg, Colo., "with no possibility of their living; simply stuck into a hole in the ground where no effort has been made to store up the needed moisture in advance of the planting." Now is the time to prepare for planting trees by giving the land clean cultivation following deep plowing to open up a reservoir for holding water. Why not select the location for your grove or shelter belt and give it a season of summer tillage to put it into proper shape for the trees next spring?

Farm property pays a larger percentage of the general property taxes of the state than any other single class of property. Approximately 40 per cent of all general taxes assessed last year are paid by classes of farm property which can be easily segregated from other property assessed, says the State Emigration Bureau in the Colorado Year Book. A careful analysis of the facts and figures given will convince any student of taxation that agriculture as an industry, and the largest one in the state, is paying too large a proportion of the general taxes of the state. The systematic campaign being conducted by the farm organizations to dig up these facts and give them wide publicity is certainly justified.

From the Nation's Capital

COMMISSION REPORTS TRANSPORTATION RATES OUT OF LINE WITH COMMODITY PRICES.

E. E. Reynolds.

THE report of the Congressional Joint Commission of Agricultural Inquiry on distribution and transportation, issued May 15, contains some interesting facts and conclusions. The commission has found, after making an extensive survey, that profiteering by middlemen is not nearly so prevalent as has been generally believed, and the conclusion has been reached that any reduction in cost of distribution will not come through legislation, but by the education of middlemen in the use of more efficient and economical methods of handling farm products.

"The commission has decided to report to Congress," says Chairman Sydney Anderson, "that the transportation rates on many commodities, more especially the products of agriculture, bear a disportionate relation to the price of such commodities; that immediate reductions in transportation rates should be first applied to farm products; that reductions in rates upon the articles of higher value are not warranted, while the rates upon agricultural products remain at their existing levels; that greater consideration should be given in the making of transportation rates to the relative value of commodities and existing and prospective economic conditions.

"We have found that freight rates on perishables normally take about one-third of the selling price and frequently two-thirds, and in periods of low prices and light demands, they constitute a heavy burden upon this traffic.

"The report will show that in October, 1921, farm products were at an index figure of 102 and railway rates at 169, and that in this period of falling prices for farm products the increased freight charges made the farmer feel more keenly the relationship of freight charges to the price obtained for his product.

In the opinion of the commission both the producers and consumers of grain and its products should have the advantages of competitive avenues of distribution through which the largest number of consumers can reasonably be reached; through rates from points of production to point of final consumption through two or more competitive grain markets; general application of the Interstate Commerce Commission's recent conclusions applying lower rates on coarse grain than on wheat, except where rates are affected by water competition.

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Joint Commission Reports Need Lower Hay Rates.—It is also the conclusion of the commission that hay must have a reduction in both rates and salesmargins before there can be a resumption of normal shipments, and in order that the producer may get a reasonable share of the final sales price.

Increased marketing costs, including freight, commission and other charges, are found to have borne with great severity upon the livestock producers of the western ranges and ranches.

Figures in the report show that the difference between market prices for wool and the return to the producer plus freight is unduly large. We believe that the price of wool to the producer has been depressed somewhat by the freight rates, but primarily by disorderly and unscientific marketing. The steps taken toward co-operative grading and selling will help to bring the wool producer closer to the consumer.

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Diversity of Opinion on McCumber Tariff Bill.—Discussion on the McCumber tariff bill in the Senate is bearing out the assertion of Senator Capper, who says: "There are indications that the opposition intends to adopt every known method of delaying the passage of the bill in the hope of defeating it." He also says that "the opposition to a protective tariff seems to come largely from international banking and importing interests whose profits depend upon how cheaply they can bring into our markets the food and manufactured articles they buy abroad, where production and labor costs are low and cheap paper money is the medium of exchange."

Senator Smoot of Utah speaks of the provisions in the pending bill which would authorize the President to increase or decrease rates and proclaim American valuations, as offering a solution of the tariff problem now before Congress, as well as suggesting a practical basis for a continuing scientific adjustment of the tariff.

The McCumber tariff bill, according to Benjamin C. Marsh, managing director of the Farmers' National Council, is a gold brick "devised under the pretense of protecting labor engaged in manufacturing, to continue huge profits of the manufacturers. The bill will not only put an additional cost of at least $1,000,000,000 a year more upon the farmers of America than they can possibly get out of it, but it will reduce the domestic market of farmers for farm products, and this market is already shot to pieces. By placing an embargo on imports of most manufactured products, the tariff bill will also kill the foreign market for surplus farm products, all for the sake of enriching manufacturers."

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Court Decision Encourages Truth-in-Fabric Bill.—A renewed effort is being made to secure action on the truth in fabric bill. The decision of the Supreme Court that labels or brands under which articles are sold, when open to construction in the minds of the purchasing public that they describe the component ingredients or materials used in the manufacture of the article, must clearly and definitely describe them, is giving hope to the friends of truth in fabric and other commodity branding legislation, as it removes any misunderstanding as to the constitutionality of such measures.

The American Farm Bureau Federation and National Grange representatives are using their best efforts to induce the committees having the bill in charge, to permit Congress to act upon it. George D. Briggs of the National Sheep and Wool Bureau of America, is directing the wool growers' fight for honest fabrics. Congressman French of Idaho, who introduced the truth-in-fabric bill in the House, is confident that if Congress as a whole can have a chance to vote on the bill it will pass the House.

Sheep and wool growers' organizations, farm bureaus, granges, farmers' unions, and individual farmers have written many letters to Congress asking for action on the bill. They are now asked to bombard Congress asking for action all along the line, asking their Congressmen and Senators to insist upon action for the Capper-French truth-in-fabric bill.

—x—

Farmer Second Largest Consumer of Steel.—The commission has found that the weighted average of farm implements, factory price, exclusive of power equipment and twine, shows that price to be 41 per cent above 1913. It would appear that the factory price of agricultural implements does not show price advances to such a marked degree as other commodities and that they are rapidly receding to a lower price level. A reduction in freight rates on pig iron, steel, coal, coke and lumber, would assist in reducing the farmer's expense for farm implements. The report shows that the farmers are the second largest consumers of steel. The farmer is also directly or indirectly concerned in from 20 to 22 per cent of the annual consumption of bituminous coal. Directly or indirectly, the commission has found that the farmers consume 46 per cent of the country's lumber production, largely in the lower grades, and on these the retailer realizes on the long hauls more in his sales margin on the freight cost than upon the lumber's mill value.

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Pay salary or commission. Men and women easily make $10.00 to $15.00 per day. Sell at sight. Burns 10 hours for 2 cents. Every lady a prospective buyer. Money Back Guarantee. Write today for particulars.

IMPERIAL SAD IRON CO.
Dept. 17 Ft. Worth, Texas

Baby Chicks

NEW LOW PRICES SEASON 1922

MILLER BABY CHICKS ARE BRED FOR HEAVY EGG PRODUCTION

Customers report pullets lay all winter. 20 varieties to select from. 1,000,000 chicks via prepaid parcel post safe delivery guaranteed. Pleased customers in every state. 19th season. Catalog FREE.

MILLER POULTRY FARMS
Box 605 LANCASTER, MO.

Kill All Flies! THEY SPREAD DISEASE

Placed anywhere DAISY FLY KILLER attracts and kills all flies. Neat, clean, ornamental, convenient and cheap. Lasts all season. Made of metal, can't spill or tip over; will not soil or injure anything. Guaranteed.

DAISY FLY KILLER at your dealer or 6 by EXPRESS, prepaid, $1.25.

HAROLD SOMERS, 160 De Kalb Ave., Brooklyn, N. Y.

15 DAY SALE **FENCE**

200 Styles 104 styles
At lowest wire mill prices. Satisfaction or money back. Book FREE—Big Offer

Ottawa Mfg. Co.
286-12 Union St., OTTAWA, KAN.

The Rural Household

Questions about home problems promptly answered by letter and through the magazine. Letters from women containing helpful suggestions for improvement of rural life are always welcome. Address all communications to Mary G. Collopy, Editor Home Department, Western Farm Life, Denver, Colo.

Pirate Dreams.

The old rocking chair is baby's boat,
Adrift on a dreamland sea;
And baby and I are the crew afloat,
All cozy and snug are we.
We rock and hum a crooning song,
Capture baby and boat and me.
But pirate dreams before very long
Like a wind in the sails at sea.
O baby! the chair some day will be
A boat for another pair;
For you with your baby will sail the sea
Within the same rocking chair.
And as we rock and hum and sing,
So you will go singing too,
And pirate dreams with sweep and swing
Will take baby, and boat, and you.

Charles Huerter.

Clothing Specialist Appointed.

Mrs. Blanche E. Hyde has been appointed clothing specialist for Colorado, effective May 1. Mrs. Hyde was, for six years, associate professor in Home Economics at Peabody college for teachers. More recently she has been special writer and investigator of patterns for the Ladies' Home Journal. She has also been special writer and has been in charge of correspondence in clothing for Modern Priscilla. Mrs. Hyde will work in co-operation with the extension service of the Colorado Agricultural college.

Problems All Mother's Face.

National Baby Week celebration ended one week ago. Our interest in better babies never ends. Mothers are continually working to give their babies clean, nourishing food in sufficient quantity; to see that they sleep on clean beds with abundant fresh air in the room; to see that both mind and body have every opportunity to grow.

With the growth of mind and body come new problems for the mother. During the past month, the editor has had two of these problems brought to her attention through correspondence.

One mother asks: "How can I impress upon my young daughters the dangers of constipation?" The young girl who helps to make a fire in either the kitchen range or the heating stove, can easily be shown the effect of too much fuel when the ash pan is overcrowded. She sees for herself the results of "clinkers." Until she empties the ash pan and shakes the grate, she will not have a satisfactory, glowing fire. She hates a smoking stove and readily makes an effort to adjust the damper. Why not encourage the daughter to get rid of her dull eyes and sallow complexion by making simple adjustments in the "damper." For the enthusiastic school girl the most serious "damper" is, "I haven't time, now."

Nurses and superintendents of girls' schools tell us that the healthiest minds and bodies are found in the girls who were taught in early childhood to take time for the care of their bodies. This habit, strongly fixed in childhood, becomes so mechanical that it is no longer a consideration for the girl of high school age. Correct positions in sitting, walking and standing are enemies of constipation. The body thrown out of natural position cannot function normally. A well known orthopedic surgeon, who sees hundreds of bone cases weekly, recently remarked that his business would be very, very dull, were it not for the effects of incorrect posture and constipation.

The second mother wrote: "My little girl is hearing too much in her first year in school. She asks too many questions about the new kittens. If I cannot satisfy her curiosity, I know that some of her schoolmates will. How can I explain some of the vital truths of life to her?" This question which comes to mothers so often has been so beautifully answered by Olga Petrova that I give you her poem:

To a Child Who Inquires.

How did you come to me, my sweet?
From the land that no one knows,
Did Mr. Stork bring you here on his wings?
Were you born in the heart of a rose?

Did an Angel fly with you down from the sky?
Were you found in the gooseberry patch?
Did a fairy bring you from fairyland
To my door that was left on the latch?

No, my darling was born of a wonderful love,
A love that was daddy's and mine,
A love that was human, but deep and profound,
A love that was almost divine.

Do you remember, sweetheart, when we went to the Zoo,
And we saw that bear with a grouch?
And the tigers and lions and that tall kangaroo,
Who carried her babes in a pouch?

Do you remember, I told you, she kept them there safe,
From the cold and the wind, 'till they grew
Big enough to take care of themselves?
Well, dear heart,
That's just how I cared for you.

I carried you under my heart, my sweet,
And I shielded you safe from alarms,
Till one wonderful day Our Lord looked down,
And my darling lay in my arms.

—Olga Petrova.

My Neighbor's Story.

Mrs. R. lives on a farm twelve miles from one of the larger cities in Idaho. In a recent letter she tells of a simple plan for making a little money:

"Like many of our neighbors, we lost money on sheep last winter. For a time we almost gave up. My husband started working by the month, so I decided to do my part. At first, I started making cottage cheese. I bought neat containers and delivered the cheese in good condition. At one teacherage I disposed of several pints each week. The teachers praised the cheese so the children's parents heard of it. This gave me an introduction into many homes.

"On several visits to different homes I noticed the scarcity of dish towels at dish-washing time. This gave me another idea. From the baker I bought empty flour sacks to add to the supply of large sacks which I had on the ranch. These I hemmed and bleached ready for sale. You have no idea how many town women were glad to buy six or one dozen towels. I sold many of them to brides-to-be among the teachers. The towels were hemmed by machine so that the time consumed did not interfere with my cheese making work. From now on I plan to solicit mending and patching. The teachers have promised me their work and have told me of a men's boarding house where a large group of men will be very glad to have someone darn their socks and mend their clothes."

Our Fashion Service.

All patterns 12 cents each. Address Western Farm Life, Pattern Department, 1518 Court Place, Denver, Colo.

Read This Before Ordering: Patterns ordered through this magazine are mailed promptly from the factory at Brooklyn, N. Y., and arrive in 10 to 12 days from time order reaches Western Farm Life. Be sure to specify size and number of patterns. Write your name and postoffice address plainly to avoid delay. These patterns are handled at cost, as a service to our women readers. The price of 12 cents includes postage.

3971—A Popular Ever Seasonable Style. The apron and house dress are now considered an essential in every woman's wardrobe. Surely the model here portrayed will be much admired for its

graceful lines and attractive pocket. As a porch "dress" or for garden and kitchen, this style will be very satisfactory. The pattern is cut in four sizes: Small, 34-36; Medium, 38-40; Large, 42-44; Extra Large, 46-48 inches bust measure. A medium size requires 4 yards of 36-inch material. The width at the foot is about 2 yards.

3975—A Popular Style With New Fea-

tures. This jaunty model will be very pleasing in crepe satin, in Poiret twill, or serge, and also in pongee, gingham and cotton prints. The waist has long lines, and becoming fulness. The skirt is comfortably wide and in approved length. This pattern is cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires 4½ yards of 40-inch material. The width at the foot is 2¼ yards. Plain and contrasting material combined is excellent for this model.

3945—A Smart Top Garment. The cape feature is much in vogue at present. It adds to the jaunty appearance of this up-to-date style. Twill, serge, flannel, linen or taffeta are good materials for this model. The trimming may be a simple finish of stitching in rows, or binding with braid, or braid applied in a design. The pattern is cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. A 38-inch size requires 3⅛ yards of 44-inch material for the jacket and ⅞ yard for the cape.

3946—A Pleasing Frock for Mother's Girl. Pattern 3646 is shown in this illustration. It is cut in four sizes: 4, 6, 8 and 10 years. An 8-year size will require 3¼ yards of 27-inch material. The dress closes at the side under the panel. Pongee, poplin, repp, gingham, calico, serge, gabardine, taffeta, and linen, are good for this model.

CATALOGUE NOTICE.

Send 12c in silver or stamps for our UP-TO-DATE SPRING AND SUMMER 1922 CATALOGUE, showing color plates, and containing 500 designs of Ladies', Misses' and Children's Patterns, a concise and comprehensive article on dressmaking, also some points for the needle (illustrating 30 of the various, simple stitches), all valuable hints to the home dressmaker.

How to Make Profitable Income on a Plains Farm.

(Continued from Page 5).

get ripe and then stacked, the hogs will run to it and help themselves. The barley should provide grain for chickens, horses and cattle, and the straw can be used in various ways, even for feed for stock in the blizzards. The corn and cane can be used for silage or dry fodder for the cows and they should also have a ration of clover hay at night. Sweet clover can be pastured usually the first year and pastured for a time and then cut for hay the second year. Unless the farmer has a mill on the ranch for grinding grain, he will have to buy his bran and chop for the cow mash. Almost any grain on the farm may be ground, mixed with bran, and fed to milk cows.

On sandy soil great care should be taken to rotate the crops to help keep up the strength of the land. Sweet clover is a great help in doing this. Every two years it can be planted in a different place until every field has had its turn and then all over again. All grain should be cut high so as to allow plenty of stubble to turn under, and all manure and waste straw should be returned to the land.

Must Apply Right Methods.

Anything can be raised on the plains farm if you have the soil and apply the right methods. There is no law to compel a farmer to plant a crop until he has conserved enough moisture to mature it and anyone can do this by fallowing until he gets it. A first class soil is the ordinary chocolate loam with a clay bottom, and on this winter wheat can be raised by summer fallowing. Potatoes or beans also will do the best on the summer fallow, but usually can be raised with a profit on fall plowing worked over in the spring. Spring grain never should be planted on spring plowing, for it always makes a short crop.

Fall plowing is the next best to summer fallow for all small grains, alfalfa and clover. If the farmer has no time to plow his corn land in the fall the next best move is to plow as early as possible in the spring and let the land lie two months or so before planting. The same method applies to all the sorghums and Sudan grass. The dry farmer should do his utmost to plow as deeply as possible—ten inches is none too deep—and also to plow as much as he can in the fall. The best way to put in corn is to plow or list the land in the fall and then list the corn at planting time across the original plowing with a seeding lister.

Many failures result from plowing late when the ground is dry and planting immediately. The ground is overaerated, there is no moisture conserved by fallowing, the crops fail more or less, and the farmer says there is nothing in deep plowing.

Money is sometimes uselessly expended in threshing. On the diversified farm the chickens will do their own threshing. The pigs will do the same and the cattle and horses will just as soon eat their grain on the straw as out of the feed box.

State Farm Bureau News.

Colorado farmers are having the opportunity to take action on a number of matters of national importance. W. G. Jamieson, former president of the Colorado State Farm Bureau, and member of the executive committee of the American Farm Bureau Federation, reports that big issues concerning the agricultural industry in the entire United States are being incorporated in the report of the Agricultural Inquiry Commission. Mr. Jamieson was a member of a number of sub-committees whose duties were to shape this information into tangible form for the use of the commission in preparing its final report. He was retained in Washington more than a month by Secretary Wallace to represent the western states in this work.

The executive committee of the State Farm Bureau has had referred to it for action and approval several matters of national importance. Gray Silver, Washington representative of the American Farm Bureau Federation, has referred to Colorado for approval the protective tariff on alfalfa and other grass seeds amounting to from 2 to 4 cents a pound. O. W. Sandberg of the transportation department advises a proposed reduction of 15 to 20 cents in the freight rate on condensed milk from Fort Lupton and Johnstown to points in Kansas and Nebraska.

The appropriation for maintaining and extending extension service was cut $500,000 by the House of Representatives after being approved by the Bureau of the Budget. The Senate replaced the $500,000 in the appropriation at the urgent request of the American Farm Bureau Federation. When this matter was brought to the attention of the Colorado State Farm Bureau by Mr. Silver letters were sent to each of our representatives in Congress outlining the necessity of the increased appropriation to meet the urgent demands for extending the service into seventeen new counties in Colorado. Late reports indicate that $300,000 of this has been approved and passed by the House as a result of the representations made by the organizations in Colorado and other states.

Stockyards Boycott Broken.

The order recently issued by the Secretary of Agriculture against the "old line" commission firms on the East St. Louis livestock market in accordance with the Packer and Stock Yards Control Act has had the desired effect of making the National Stock Yards an open market. That the boycott attempted has been effectively broken was demonstrated on a recent day when four out of the five loads of hogs sold at the top of the market were handled by the Producers' Livestock Commission association.

New State Organizer.

O. E. Wolcott, fieldman for the American Farm Bureau Federation, has been retained in Colorado to take the place of Charles G. Stonebraker, who was called from directing the organization work to his home in Iowa on account of sickness in his family. Mr. Wolcott, who has operated a 200-acre Illinois corn and hog farm for the past twelve years, gives the following reasons for temporarily leaving his farm work and his home to aid in farm organization work:

"My experience as a farmer convinced me that the farmer as a class should know more about his own channels of marketing and the conditions which control supply and demand. He should have a larger marketing period and should be as much interested in the marketing and distribution of his product as he is in producing it. If he markets in one day what it takes him one year to produce, he at once unbalances the supply and demand for his product. The Farm Bureau, through its local units and by its definite accomplishments, promises relief for this condition, and I consider it my duty to help carry the message to my fellow farmers."

Mr. Wolcott also states that his observations out in the communities of the United States where girls, women and children are doing hard labor to keep up production which maintains the girls, women and children of the cities in luxury, convinces him that there is an unbalanced social condition that must be remedied.

Electrifying the Farm.

Recent tests at the Missouri experiment station show that the cost of electricity manufactured by the farm lighting system is becoming very reasonable. The average fuel and oil cost, in a number of tests reported by J. C. Wooley of the agricultural engineering department, was 5½ cents per kilowatt hour when using kerosene. Allowing $25 a year for depreciation of the plant, the figures would compare favorably with the cost of electric current used in the city home. The reduction in price of this equipment is stimulating popular interest over the state, says Professor Wooley. Inquiries are much more numerous and to the point than they have been in past years.

Experiment Station Steers All Return a Profit.

(Continued from Page 3.)

Mendelson, agriculturist of the Great Western Sugar company; E. L. Montgomery of Longmont, a practical feeder, and others. A banquet of fifty plates started the evening program. Dr. Lory, president of Colorado Agricultural college, gave the address of welcome, and made an appeal for the betterment of the public schools of the state. Ex-Governor Ammons gave a spirited address on the importance of the livestock industry to Colorado, and emphasized the need for better stock, and particularly the necessity for feeding out cattle at earlier ages to lessen the overhead of cattle production and produce beef of the kind the public is now demanding.

Steers Topped Denver Market.

The steers were on the Denver market May 3 and brought prices in line with the valuation at the station yards. The cattle took practically no fill at the Denver yards and weighed approximatey seventy-five pounds to the steer less than at Fort Collins. The prices paid for them, however, were enough higher to just about make up the difference in the lesser weights.

The actual purchase by the packer buyers was at the rate of $8.25 a hundred straight, for the five top lots, but valuations based on this average purchase price were given by lots as follows: Lot 1, $8.50; Lot 6, $8.40; Lot 5, $8.30; Lot 4, $8.15; Lot 3, $8, and Lot 2, $7.75.

The cattle dressed out an average of 62.60 per cent. The dressing percentage by lots was as follows: Lot 1, 63.70; Lot 2, 62.30; Lot 3, 61.50; Lot 4, 62.40; Lot 5, 63, and Lot 6, 62.50. The results clearly prove that prime beef can be made profitably from the by-products of beet sugar production and that it is not necessary to be located within a few miles of a factory to utilize the feeding products.

Ropp's Ready Reckoner

A Handy Calculator for Farmers and Stockmen

It Saves You Time!

It shows at a glance the number of bushels of any grain in quantities up to a carload; the amount of hay in the stack; the cash value at a wide range of prices of all grains, by the bushel or weight; the value of cattle, hogs and produce at a wide variation in prices, the amount of butterfat in milk, wages on the basis of working days; the number of square feet of lumber in any size stick and the number of posts in a thousand feet; the capacity of cisterns, tanks, boilers and containers; the standard weight of all grains and seeds per bushel; capacity of wagon beds, granaries, corn cribs, round and square; the fodder capacity of silos and the number of cattle they will feed for six months; interests on various amounts at different rates of interest. More than seventy points of law clearly defined.

It also contains a section for accounts—a system of tabulated pages, so arranged that every item of every crop or department of the farm can be entered and the amount of profit shown at a glance.

This little book is 3½x6 inches—just the right size for the pocket, and contains 128 pages of useful information. Once you have used it you would not be without it.

FREE

A Rapid Reckoner given absolutely FREE, postage paid, with a three-year subscription to Western Farm Life. Subscription may be new or renewal, and renewals will be extended from present date of expiration.

USE THIS COUPON

Western Farm Life, Denver, Colo.:

Gentlemen—Enclosed herewith find $1.00 for which please renew my / send me / WESTERN FARM LIFE for three years, and send me, postage paid, the Rapid Reckoner.

Name .....

Post Office .....

R. F. D..... State.....

5,000 INQUIRIES

This Week

Will Be Given

the opportunity to take off from the purchase price of the

Curved American Flint Hollow Tile

—SILO—

the usual salesman's commission. We are giving up salesmen and giving the farmer the benefit in a lower price—in fact, a pre-war price.

IF YOU INQUIRE NOW THIS OFFER IS GOOD IF YOU BUY BEFORE JUNE 15

We'll Make This Worth Your While.

Write us today for description and special prices.

Coates Mfg. Co.

1615 Wazee St., Denver.

SEED CORN

FOR SALE—Highest quality registered Minnesota No. 13. Official germination test 98%. While it lasts. $4 per hundred. F. O. B. Littleton.

BLAKELAND FARMS,
On Colo. Springs Rd., Littleton, Colo.

Motorcycle Bargains

A saving of at least half on all makes of Motorcycles and Side Cars, singles or twins—expertly rebuilt, guaranteed. Better buys than new machines. Send 2c for Bargain list.

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MORE MONEY FOR YOUR GRAIN

Stop Fire, Rat, Mould or Weather Losses. Hold for top prices. MIDWEST METAL GRAIN BIN, strong, portable, and EASY to erect. No special tools. Saves all your grain, makes you more money. Special low price now. Freight prepaid.

FREE Send name today, for photos, folder and low price offer.

MIDWEST STEEL PRODUCTS CO.,
86 American Bank Bldg., Kansas City, Mo.

WIN $1000.00
SEND NO MONEY!

Get the Big Picture Puzzle FREE

Send at once for big clear copy of the small picture puzzle shown here. Complete instructions and full details will be sent at once by first class mail. Do not try to solve puzzle from the picture, but get a good clear copy to work from.

FIND THE MOST OBJECTS BEGINNING WITH "C"

You can find quite a few "C" objects in the above picture even though it is small. Get the big free picture and full details and if you intend to go in for the big prize, send no money but just use the coupon and make your answer eligible for the big prize at once.

FOLLOW THESE RULES

First prize will be given for the largest number of words which correctly name objects shown in the picture beginning with "C". Prizes will be awarded according to the prize list shown here and in case of ties the full amount of the prize will be awarded each tying contestant. Each object can be named only once. Webster's New International Dictionary will be used as authority for all words by the Judges, and one credit will be given for each correct word and one credit deducted for each incorrect word. Do not include obsolete, hyphenated or compound words. Winning lists will be based upon all the applicable words submitted and not from any master or predetermined list. Where the singular is used the plural cannot be used and vice-versa. Where several synonyms are equally applicable to any object, any one of such synonyms will be given credit. Answers must be mailed by June 24, 1922. The winning answer will be published and a copy sent to anyone sending in a self addressed stamped envelope.

The Prizes

Winning answers will receive prizes as follows:

	If No Laymore is Ordered	If $2 Worth of Laymore is Ordered
1st	$20.00	$1000.00
2nd	15.00	500.00
3rd	10.00	150.00
4th	5.00	75.00
5th	5.00	40.00
6th	3.00	30.00
7th	3.00	20.00
8th	3.00	20.00
9th	2.00	15.00
10 to 15	2.00	10.00

Laymore

"Makes the Lazy Hen Lay"

SEND NO MONEY

Thousands of poultry raisers are making big money by using Laymore. This scientific discovery acts on the laying organs of the hen with amazing results. In order to get more people acquainted with Laymore we are putting out this big booster picture puzzle campaign. If no Laymore is purchased 1st prize will be $20.00; but if you wish to try for the big $1000.00 prize fill out the coupon and the Laymore will be sent without your advancing one penny. Pay the postman $2.00 plus the small postage fee and your answer will be eligible for the $1000.00 prize. The Laymore will be sent at once, but your answer can be mailed any time up to June 24th. Mail the coupon now.

MAYER COMPANY

620 Washington Ave. N. MINNEAPOLIS, MINN.

USE THIS COUPON

MAYER CO., 620 Washington Ave. North
MINNEAPOLIS, MINN.

Send me the big picture puzzle and full instructions FREE. Also send me 5 packages of Laymore for which I agree to pay the postman $2.00, plus postage, on arrival. This order makes the answer I will send in eligible for the big $1000.00 Prize.

NAME _____

TOWN _____

_____

SECOND ANNUAL AUCTION SALE
Purebred Poultry --- R. I. R. --- S. C. and R. C.

Will be held at

THE ROMOCO POULTRY FARM
LITTLETON, COLO.

Saturday, June 3d, 1922, at 2 p. m.

Offering Includes Yearling and Two-Year-Old Cocks, Yearling Hens, Specially Mated Pairs and Trios
ALL FROM ROMOCO'S NOTED STRAIN.

Romoco is located on concrete road to the Springs. Littleton street car passes our door, and only two blocks from depot.
Mail and telegraph bids accepted.

Merk's Poultry Farm, Box W, Rocky Ford, Colo.

We are offering the opportunity of the season to get new blood for your your next season's matings in the way of 8 to 12 weeks old cockerels. Every one a vigorous, early maturing, egg-type male. They will improve your flock in egg production and vitality, and the cost will be only about 20 per cent of what you will have to pay next winter. Order now for the best selections. **Special prices on June-hatched Baby Chicks.**

24 BLAKELAND BUSINESS LEGHORNS LAID 4,804 EGGS IN 365 DAYS.

These eggs sold for $191.92, or $8.33 average per bird. Our best record pullet last year laid 292 eggs. The foundation for such a business can not be bought for a song. Our prices are reasonable. BLAKELAND STANDS FOR QUALITY FIRST, LAST AND ALWAYS. Write for Catalog B.

Blakeland Farms, ON COLORADO SPRINGS ROAD **Littleton, Colo.**

SHIPMAN'S S. C. R. I. R.

To make room for young stock, will sell some of my Hoganized breeders at half price. Males $5, females $4.50; Hoganize from 210 to 250 egg type. Setting eggs from same stock reduced and guaranteed. Also some stock S. C. Anconas, males $3, females $2, Hoganized.

W. F. SHIPMAN.
Rt. 2, Box 586. Edgewater, Colo.

Willow Creek Poultry Farm

Breeder of highest grade heavy WINTER-LAYING SINGLE COMB WHITE LEGHORNS. Sell hatching eggs for the old chicks and hatching eggs from pedigree hens on free range. Prices reasonable. Write for catalog it.

WILLOW CREEK POULTRY FARM,
Box 857. Lamar, Colo.

ALFALFA $10 bushel; Red Clover $15, Alsike $15, Sudan, $5.00; Timothy $3.00, Cane Seed, $20; Blue Grass, $25; Sweet Clover, $2 bushel free. We make prompt shipment. If our seeds do not please you in every way you are at liberty to return to us and get your money back. Order now, prices are going higher. Order right from this ad or send for samples.

RELIABLE SEED CO., SALINA, KAN.

TARX
SOLIDIFIED DISINFECTANT

A Better Dip in a Handier, Cheaper Form

Comes in cube-marked cakes instead of cans. Solid like soap. You simply cut off and drop one of the handy Tarx cubes in a gallon of water and you have 1 gallon of the best dipping and disinfecting solution you ever used.

Each Cube Makes 1 Gallon

No pails, work—no waste—no bother—no leakage—no breakage. You pay nothing for bottles, barrels or cans. No freight on factory water which you can just as well add at home. Easily shipped anywhere. Packs in small space. Keeps indefinitely.

Order Direct from This Ad

Send only $2.00 (check or M. O.) for 6-lb package. Makes 100 gallons, all prepaid. If you are not pleased your money will be refunded. You take no risk. Send today.

TARX CHEMICAL CO. (5)
53 Peoples Gas Bldg., Chicago

A 40 Lb. PACKAGE MAKES 1200 GALLONS

Profitable Farm Poultry

W. E. VAPLON.

Questions about the farm flock promptly answered by letter. Free advice on all phases of poultry production. Address all inquiries to Poultry Department, Western Farm Life, Denver, Colorado.

If you would have your chickens do well always keep the coops and brooders perfectly dry and clean. A good litter for young chicks to scratch in is alfalfa leaves and chaff from the barn floor or the mangers where stock is fed. Dampness and filth means disease and loss.

Cold, damp, poorly lighted and ventilated quarters for the poultry favor the spread of such diseases as roup. Such contagious diseases as these are difficult and sometimes impossible to control unless given attention in the early stages. Whenever preventative measures fail, separate sick birds from the flock as soon as there is evidence of disease and then obtain expert advice as to the best means to affect a cure.

Destroy Mites and Lice.

"In time of peace prepare for war." Why have war at all? Get on to the battle ground right now and assert yourself before the enemy crawls out of his hole with the warm days of spring, and there will be no war.

The poultry house should be the scene of action and the red mite the enemy. There are only two things that the mite fears, and these are cleanliness and oil. First of all, thoroughly clean your poultry houses, making sure to scrape clean the perches and roosting quarters.

Nearly any kind of oil will kill the mites, but economy should be practiced in its use. What happens to the crank case drainings from your automobile? These drainings have plenty of body and may be used very effectively upon the roosts of your poultry houses. They not only kill the mites, but also keep them away. Warm the oil to be used until it spreads freely and apply with a spray pump or a paint brush. Be sure to soak up the cracks in the house. Other remedies that may be used are: Kerosene, zenoleum and white wash. Use one of these remedies now and again next June and there will be no trouble with the mites.

How about the lousy birds? The body louse is hatched, lives and dies on the bird. If it leaves the body or the bird for two or three days it dies. The best remedy for lice on fowls is sodium floride, which may be purchased at any drug store. In cold weather use the pinch method of application. Place a pinch of the powder in the fluff below the vent, a pinch down each side and on the thighs, one on the back, head and under the wings. Make sure that the powder is rubbed well into the feathers and on the skin. Do not miss a single bird in the flock and you will be rid of the lice.—R. E. Waldo, Idaho.

Mongrels Short on Profit.

Standard-bred hens lay more eggs than mongrels. The ability to lay a good many eggs is an inherited quality. Many standard-bred poultry breeders have long realized the importance of high egg production and have selected their stock for improvement. One thousand standard-bred pullets at the Connecticut egg-laying contest produced, on an average, 162 eggs each, while at New Jersey the record was 161 eggs for each pullet. Flocks of mongrels usually produce about seventy-five to ninety eggs per hen.

The Kansas State Agricultural college completed an interesting breeding experiment recently. Common mongrel hens were bred to standard-bred males from good laying stock. The increase in the production of the offspring as compared to that of the mothers was phenomenal. The mongrel hens in one pen produced 104 eggs each in a year. Their daughters, from a standard-bred Barred Rock male, produced 134 eggs. The second generation produced 165 eggs and the third, 207 eggs. With Single Comb White Leghorn cockerels and mongrel hens, the results were even more spectacular. The egg production was increased from 74 to 198 eggs for each hen in just three years.

A flock of uniform size, type and color always looks better than a flock of mongrels. Owners take more pride in good looking birds and give them better care. The hens respond quickly to good care and produce greater profits. Eggs and market poultry produced by a flock of standard-bred chickens are uniform in size, shape, color and quality, and are consequently worth more on the market.

There is a demand for good breeding stock and eggs for hatching in every community in Colorado. Many people are willing to pay good prices which will net the producers fair profits. A large number of poultry producers throughout the state sell their cockerels for from 75 cents to $1.50, while our good standard-bred poultry breeders get from $3 up, depending upon the quality of their stock and the reputation which they have built.

It is easy to start with standard-bred chickens. Buy a few settings of eggs from a standard-bred flock or buy a dozen standard-bred hens and a cockerel and you have made a start. Most rapid improvement will be made by using males produced from high egg-record hens.

The buying of hatching eggs or day-old chicks is usually the easiest and the cheapest way to start.—P. C. Jamieson, C. A. C.

How Culling Pays.

That culling pays is apparent from a report reaching the extension department of Colorado Agricultural college from Mrs. Paul Preifert, of the Tri-County community of Lincoln county. After seeing a culling demonstration, Mrs. Preifert went home and culled a flock of fifty-nine hens, leaving thirty-five. These thirty-five hens laid 454 eggs in January.

Hatching Geese Eggs.

Will you please give me all the information you can on the hatching of geese eggs and the care of goslings. I have set a hen on geese eggs in a bottomless box on the ground. Is this a good place for hatching? I must use hens for hatching.—Mrs. J. M., Wyoming.

Usually better results come from hatching with hens than with the goose mothers. A nest on the ground is better than one away from the ground. You can obtain a free copy of Farmers' Bulletin 767, "Raising Geese," by writing to the United States Department of Agriculture, Washington, D. C.—G. C. W.

Mineralized Water Routs Chicken Lice

Tablets Dropped Into Drinking Founts Banish Vermin, Make Fowls Grow Faster and Increase Egg Yield.

Any poultry raiser can easily rid his flock of lice and mites, make chickens grow faster and increase their egg yield by simply adding minerals to the fowls' drinking water. This does away with all bother, such as dusting, greasing, dipping and spraying. The necessary minerals can now be obtained in convenient tablets, known as Paratabs. Soon after the fowls drink the

mineralized water, all lice and mites leave them. The tablets also act as a tonic conditioner. The health of the fowls quickly improves, they grow faster and the egg yield frequently is doubled. Little chicks that drink freely of the water never will be bothered by mites or lice.

The method is especially recommended for raisers of purebred stock, as there is no risk of soiling the plumage. The tablets are warranted to impart no flavor or odor to the eggs and meat. This remarkable conditioner, egg tonic and lice remedy costs only a trifle and is sold under an absolute guarantee. The tablets are scientifically prepared, perfectly safe, and dissolve readily in water.

Any reader of this paper may try them without risk. The laboratories producing Paratabs are so confident of good results that to introduce them to every poultry raiser they offer two big $1 packages for only $1. Send no money, just your name and address—a card will do—to the Paratab Laboratories, Dept. 895, 1100 Coca Cola Building, Kansas City, Mo., and the two $1 packages, enough for 100 gallons of water, will be mailed. Pay the postman $1 and postage on delivery, and if you are not delighted with results in 10 days—if your chickens are not healthier, laying more eggs and entirely free from lice and mites—your money will be promptly refunded. Don't hesitate to accept this trial offer as you are fully protected by this guarantee. —Advt.

Dairying and Hog Raising

All letters regarding commercial and technical features of dairy farming and hog production promptly answered. Address all communications to Dairy Department, Western Farm Life, Denver, Colorado.

Unless properly handled, rye pasture gives milk an objectionable flavor. Rye is too valuable a pasture crop to give up because of this difficulty. It is being quite generally used as a pasture and is valuable for all kinds of livestock. In order to overcome its tendency to flavor the milk the cows should be pastured for two or three hours immediately after milking and then taken off until after the next milking. If this is done there need be no trouble in avoiding the flavor caused by pasturing milk cows on rye.

Dairying at State Fair.

Dairying in Colorado has got to the point where it can "tell the world" of its importance to the state. A monster dairy exposition is being planned for the Colorado state fair this fall. Many special prizes will be offered. Manufacturers of dairy equipment are responding to the call and will make large exhibits. Breeders and dairymen are rising to their opportunities and already it appears that most of the space in the new cattle pavilion will be required to house the dairy cattle. From present indications the Colorado state fair dairy exposition will be the biggest event of its kind ever conducted in the west.

Feeding Value of Mangels.

What is the feeding value of sugar beets and mangels for milk cows? Do they make the milk taste? Which of these two roots is considered best as feed?—R. O. B., Idaho.

Either of these root crops make good feed for milk cows. In a way they are a substitute for silage. In long series of comparative tests made, it has been found that a pound of dry matter in either mangels or sugar beets is equivalent to a pound of grain when fed as part of the ration. Of course, these roots contain a large proportion of water, the mangel being more watery than the sugar beet. It requires about ten pounds of mangels to supply one pound of dry matter and a little over seven pounds of sugar beets to supply a pound of dry matter. Neither of these roots flavor the milk.

The mangels are commonly grown for feeding purposes, because they produce large tonnage and grow well out of the ground, which makes them easier to harvest than sugar beets. The mangels also bear storage better than sugar beets. Sugar beets should not be fed in excessive quantities, since they are rich in sugar and may cause scouring. The mangels will also do this, if fed heavily right after they are harvested. It is better to store them a while before beginning to feed. There is practically no difference between these two root crops in feeding value on the basis of the dry matter they contain.—G. C. W.

New World's Record Jersey.

An Oregon Jersey cow, Lad's Iota, recently completed a record of 1,048.07 pounds of butterfat in one year, and 18,632 pounds of milk, exceeding the former Jersey champion, Plain Mary, by eight pounds of butterfat. This cow produced in one year more than her own weight in fat. She is owned by S. J. McKee, who personally fed and milked her in making her first record as a junior three-year-old. She finished this record with 766 pounds of butterfat. She has carried a living calf more than 200 days during the making of the present record and if the calf is dropped normally in June she will win the president's cup of the American Jersey Cattle Club and a medal of merit, in addition to the distinction of being the Jersey queen.

Keep the Pigs Healthy.

Internal parasites, worms, are one of the most prolific sources of unthriftiness in pigs, and every effort should be made to keep them free from these enemies of health and vigor. The fight should have begun by practicing thorough sanitation at farrowing time. With a proper system hogs can be raised practically free from worms. If the farrowing pens were cleaned with hot water and lye or other good disinfectant and the sows washed and cleaned just before putting them into the clean pens the first step has been taken. Two weeks after farrowing the litters should have been taken to a clean pasture where the pigs do not come in contact with old hogs. By keeping the pigs on clean pasture for four months, where old hogs have not been kept for a season, with proper feed, water and shelter, a thrifty pig ready to make good use of feed for final finishing should be the result.

Survey of Spring Farrow.

A survey involving 1,102 purebred Poland China herds in thirty-five states and Canada, supervised by the Poland China Record of Kansas City, shows an average of 9.10 pigs to the litter for the spring farrow of 1922, from tried sows, and 7.5 from gilts. The general average for sows and gilts was 8.55 to the litter. The per cent of pigs saved was 72.04, which is rather an abnormal mortality. A similar survey made last year showed an average farrow of 8.46 pigs to the litter and in 1920 it was 8.10. This is probably the first authentic report on breed prolificacy ever made on such an extensive scale.

Hogs Need Minerals in Diet.

Hogs must have a sufficient amount of mineral matter to keep healthy and thrifty. The following formula has been tested by the Iowa experiment station and is recommended for use of hog growers:

	Pounds.
Slack coal	500
Stock salt	40
Ground bone (fine)	35
Stock sulphur	15
Air-slacked lime	15
Glauber's salts	8
Epsom salts	7
Copperas	2.5
Potassium iodide	0.4

Mix these ingredients and keep before the hogs in a trough so they have free access to it at all times.

Shorthorn Milk Records.

Duchess Clay has completed a senior two-year-old record at Pine Valley Dairy & Farms Co., Colorado Springs, Colo., of 12,318 pounds of milk and 410 pounds of butterfat, making her the second highest on the Shorthorn list for that age. Her own sister, Imperial Duchess, has completed a four-year-old record of 11,589 pounds of milk and 431 pounds of butterfat. These two cows are sired by Imperial Clay and their dam is a Scotch-topped cow, Scotch Duchess 15th.

Pine Valley Lass, a three-year-old Shorthorn cow at Bonvue Farms, Golden, Colo., has completed a record of 10,048 pounds of milk and 399 pounds of butterfat in a year. She is by Royal Buttercup 2nd out of Lady Victor, that has a yearly record of 8,089 pounds of milk and 334 pounds of butterfat. Pine Valley Lass is a distaff sister of Victoria, that has a five-year-old record of 15,483 pounds of milk and 569 pounds of butterfat.

Increase in Brood Sows.

An increase of about 10 per cent in the number of brood sows in Colorado is reported by the crop reporting service. The number given in the estimate is 88,000. Very little disease is being reported, although there has been some complaint of losses of spring litters. The advance in price for pork and the abundance of cheap feed is given as the reason for the increase in brood sows.

Good Farrowing Record.

A record of better than eight pigs as the average farrowed to the litter was made by Earl A. Riggs in his Excello herd of Duroc Jerseys at Greeley this spring. Many of the sows were gilts with first litters, which makes the record even better. An average of better than seven pigs to the litter has been saved. The good results obtained show Mr. Riggs' skill as a hogman.

Thirty Litters in Fifteen Years.

A South Dakota hog man just sent to market an old Poland China sow that had earned the title "grandma" as a result of farrowing thirty litters of pigs in fifteen years. This sow was purchased as a gilt the fall of 1906. She was purebred but was not recorded. Her owner states that she never missed a litter, never farrowing less than eight pigs and often twelve, and nearly always raised every pig. She was the dam, grand dam or ancestor of every hog on his farm.

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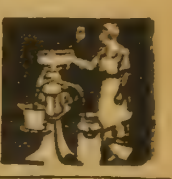

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Hard Lump in Udder.

Two months ago a hard lump about the size of an egg appeared in the udder of one of my cows. She has been fresh seven months. Now the lump is the size of my fist and appears to be attached to the abdomen.—R. G. D., Otero county, Colo.

The tumor on the cow's udder may be any one of a large number of tissue growths, some of which are malignant. Again, it might be a gaseous abscess or a varicosed vein. The fact that it is growing larger makes it look suspicious. We will suggest that your veterinarian aspirate the tumor to determine its nature. The treatment will naturally follow the diagnosis.—G. H. G.

Centrifugal Pump Advised.

What is the best pump to lift water fifty feet for irrigation purposes? I have heard that there is a pump made in Denver which is highly recommended—J. H. G., Pitkin county, Colo.

Engineers of the Reclamation Service advise the centrifugal type of pump as the best for your purpose. You did not state the amount of water needed or the supply available. These points would enter into the matter of selecting a pump and also the advisability of attempting to irrigate from a well fifty feet deep.—G. C. W.

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R. C. RED EGGS, $4.75 PER 100, POSTPAID. Fleda Jenkins, Jewell, Kan.

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BABY CHICKS—SILVER-LACED WYANDOTTES. Mrs. George Siemers, Rt. 2, Clay Center, Kan.

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S. C. BUFF ORPINGTON EGGS; HENS OF OWen's breeding; cockerels direct; $2, 15; $10, 100; baby chicks, 20c; also 10-weeks-old cockerels and pullets. Mrs. Harry Steele, Wamego, Kan.

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ALFALFA SEED, 95% PURE, $6 BUSHEL, sacks free, track Concordia. Geo. Bowman, Concordia, Kan.

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LARGE WHITE-BLOSSOMED SWEET CLOVER seed, just milled; price 10c per lb. plus sacks. Elliott Ranch, Strasburg, Colo.

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HEMSTITCHING AND PICOTING ATTACHment, fits all sewing machines, price $2.00. Checks 10c extra. Light's Mail Order House, Box 127, Birmingham, Ala.

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FACTORY CLOSING OUT, LESS THAN WHOLEsale prices—Straw forks, manure forks, hay forks, spading forks, dirt shovels, round pointed long handle shovels, spades, long post-hole digging spades; 8 your selection, only $6. Rush your order. Process Tool Co., Salina, Kan.

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ARMY GOODS.

SALVAGE AND SURPLUS SALE OF ARMY goods. Post Army Store, 921 18th St., Denver, Colo. Write for price list.

SALVAGE AND SURPLUS SALE OF ARMY goods, Denver Army Store, 1443 Larimer st., Denver, Colo. Write for price list.

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HONEY—PURE EXTRACTED, 10 LBS. $2, PREpaid inside 600 miles. J. P. Lindahl, Greeley, Colo.

"THEBESTO ROCKY MOUNTAIN HONEY," none better; satisfaction guaranteed or money back; five-pound can, postpaid $1.50. Send remittance with order. Write for price on large quantities. The Colorado Honey Producers Association, Denver, Colo.

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KODAK FINISHING—FOR TRIAL ORDER SEND 25c any size roll six prints. Kase Studio, Neville Block, Omaha, Neb.

FILMS DEVELOPED 5c, PRINTS 2c, POST cards 5c; prize photo free. J. B. Christopherson, Box 1051, Salt Lake City, Utah.

Stopping Poultry Shipments En Route.

Word has recently been received from O. W. Sandberg of the transportation department of the American Farm Bureau Federation that permission for stopping in transit has been granted to shippers of live poultry from points in Missouri, Kansas, Nebraska, Colorado, Oklahoma, and Texas, to points in California and other destinations, as shown in Transcontinental Tariff No. 1, not to exceed two stops to finish loading, on basis of through rate, plus $10 a car for each stop. The poultry industry in Colorado is developing so rapidly that this privilege will soon be of interest to us.

The Illinois Agricultural association, which functions as the farm bureau federation of that state, has worked out a plan for the co-operative marketing of eggs and poultry. This plan is based on investigations made of actual conditions in Illinois and other states and principal markets. Instructions are also given for proper packing of eggs for shipment, and loading and feeding live poultry in cars. This information can be obtained from the Colorado State Farm Bureau at Fort Collins, or the Illinois Agriculture association at Chicago.

White Scours in Calves.

How should calf diarrhea be treated? My February and March calves were all right, but since the last of March nearly every calf born has died from scours. Most of them died before the third day after birth. They usually last only two days. When born they seem bright and strong. The cows are in good condition and give plenty of milk. Can the trouble come from the feed the cows are getting? Earlier in the season the cows were fed mesa grown hay and now it is creek bottom hay. Is the trouble contagious? After the calf is a week old it does not seem to develop the trouble.—C. M. F., Routt county, Colo.

The symptoms very strongly indicate the dreaded white scours. This is very similar to the joint disease, or navel ill in colts. It is caused by germs which gain entrance into the body of the newly-born animal through the navel. The germs are in the litter of the stall and other places about the barns, as well as on the surface of the body of the cow.

After a calf is once infected, little or nothing can be done for it. The only treatment is prevention. When white scours are in the herd, each cow, as soon as she is expected to calve, should be taken to a fresh stable, which has been thoroughly cleaned out and disinfected. Generally this will be enough to prevent this trouble in the young calves, but to be on the safe side it is well to wash the hindquarters of the cow, as soon as she starts to calve, with some stock dip solution or a solution made by mixing one-half ounce of pure carbolic acid crystals with one quart of water. Fresh litter, which has been disinfected with either of these solutions, should be provided for the calf to drop on.

As soon as the calf is dropped, the navel string should be tied with a cord which has been soaked in disinfectant. Then wash the stump of the cord and the skin around it with the following mixture: Iodine, one-half dram; iodide of potassium, one-half dram, and water, one quart. After the navel has dried off, put on a covering made by mixing ninety-nine parts of collodion with one part of iodine. It is a good plan to sponge off the udder of the cow with carbolic acid or dip solution.

If, by taking these precautions, the calf lives without scouring for a week, no further danger from white scours need be feared. Sometimes infection takes place before birth. Such infections seems oftentimes to be caused by the same germ that causes contagious abortion, according to the observations of some veterinarians.—G. C. W.

Gestation Period in Cows.

Four of my cows went ten days overtime when they calved. So far all are bull calves. I allow 275 days as the period. One cow due April 15 does not show signs of calving yet—April 17.—F. C. E., Idaho.

You are not using the right number of days for your gestation period. Extended statistics show that the average duration of pregnancy in the cow is two hundred and eighty-five days. Cases are on record where it has been extended to the three hundred and thirty-fifth day. Statistical studies made in England found a preponderance of males in the births extended beyond the two hundred and ninetieth and three hundredth days. You need have no cause for alarm in view of these facts. —G. C. W.

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who has a world record daughter. Their dams are extra good high record cows.

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Sanborn Meadows,
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We have bred hundreds of prize-winning and high-producing Holstein cows, including

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We can supply you with that same line of breeding. Write

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We offer you a wonderful amount of these Holstein qualities—and from a clean herd. Bull calves from fine record dams. Pahgre Valley Ranch, Loesch Bros., Montrose, Colo.
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Buy MILKING SHORTHORNS

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Western Farm Life can find the buyers for you and at the same time build a state-wide reputation for your herd. A good many successful breeders have put their selling problems up to our Breeders' Department and are glad they did so. It is paying them in dollars and cents.

Write for literature giving full information regarding the circulation of Western Farm Life in each county, the cost of advertising, the cost of livestock cuts and other valuable information. Address

BREEDERS' DEPARTMENT,
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1518 Court Place,
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DUROCS

Buy them young and grow them yourself. Weaned pigs, regular price $25 to $50. Our specialty for short time on good farmers' boars, weaners, $15 and $20. Show prospects, weaners, $50. Are breeding now for fall farrow. Can sell you one or a carload. Our Blue Ribbon herd was the high winner at Denver. Write today.

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From this herd came the sires of the grand champion carlot steers at the 1920, 1921 National Western. TWENTY BULLS, 2, 3 AND 4 YEARS OLD, THAT WE WILL SACRIFICE IF TAKEN AT ONCE.

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ADVOCATES URR, roan, calved Sept., 1919. Bred by H. F. Harmon. Sire, Imp. Advocates Model 647679. Dam, Maid Marian 138615; sire, Gladstone 239313. Dam, Merry Maid 2d 29528; dam, Nonpareil Victor 2d 258255. Dam, Merry Maid 72d; sire, March Knight 188105. Dam, Imp. Winsome Maid; sire, Marchison 192330.
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In picking your Shorthorn breeding stock, remember
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breeding has proved itself in the show ring. Lord Douglas calves out of Snow King heifers are even better. We will have some bulls of this breeding for sale this summer.
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BUY WEANLING PIGS
at prices that will surprise you.

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CHOICE BIG-TYPE
Poland China Pigs

Either sex, sired by F. B's Long Bob. ...WHITE LEGHORN EGGS, $2.00 per setting, $7.00 per 100.

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DUROCS Gilts bred to my champion boars and June pigs from my great yearling "Golden Chief" and a daughter of the World's Grand Champion, Great Orion Sensation, can be seen at the Stock Show.

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Fish Bite The hungry wolves get season, if you have Magic-Fish Best Fish Bait ever discovered. Keeps you pulling them out. $1. Box Free to our new fish and animal trap. Write
J. F. GREGORY, Dept. 63, Lebanon, Mo.

Market Outlook for Farm and Ranch Products.

(Continued from Page 5).

the time new wheat begins to appear on the market.

Besides these sales, large quantities of old crop Durum have been sold to Italy and hard winter stored at Montreal has been disposed of. Greece recently placed her periodical order for about 1,500,000 bushels of Manitobas and other European countries have been buying from the same source.

The domestic demand for wheat remains a disappointment. Flour trade is said to be about as dull as it can be, with buyers waiting until the future of the wheat market is better known. Eventually, broader scale purchases will be necessary and it is only a question of time until mills will be more eager for wheat. Receipts have increased recently, but the milling demand, dull as it is, has absorbed all the choice wheat offered at large premiums.

When Will Wheat Scarcity Arrive?

No actual scarcity of wheat has yet been detected, although the situation holds the possibility that the owners of the last 100,000,000 bushels or so needed for the world's trade will tighten their grip and not relinquish it except at a substantial advance. The world's carryover at the end of the crop year will be the smallest in three or four years. The European new crop outlook is decidedly spotted, with conditions in France especially unfavorable. The drouth which checked planting in Australia has been only temporarily relieved.

Crop reports from Kansas, Oklahoma and Texas are better, as rains have been heavy and enough moisture has fallen in the Southwest to carry the plant well toward maturity. Conditions have favored the wheat which started late, but the outcome will be in doubt until harvest. Private observations point to a small decrease in spring wheat acreage.

Corn Market Creeping Upward.

A creeping bull movement is on in the corn market, with cash prices gaining rather steadily on the distant deliveries. Exporters are selling rather large amounts, especially to Germany, and domestic consumption appears to be heavy, although industries have not expanded operations a great deal. Receipts have enlarged moderately in the last ten days, but a heavy run is not expected until after planting is completed. The visible supply has decreased about 30 per cent from the high point of the season.

In spite of the move to reduce corn acreage, preliminary estimates indicate a slight increase in the states of large production partly as a result of a late oats seeding season.

Oats Disappearing More Rapidly.

The visible supply of oats has decreased about 20 per cent from the high point of the season, but it is still 15 per cent larger than was ever known until the present year.

Cash Grain Markets.

The range of cash grain prices follows:

Omaha—Wheat: No. 2 hard, $1.29@1.39; No. 3, $1.27@1.34. Corn—No. 2 2 yellow, 53@55¼c; No. 3, 53½@54¾c; 2 yellow, 53@55¼c; No. 3, 53½@53¾c; No. 2 white, 53@54½c; No. 3, 52½@54c. Oats—No. 2 white, 36¼@37c; No. 3, 35½@36c.

Kansas City—Wheat: No. 2 .hard, $1.28@1.58; No. 3, $1.26@1.54. Corn—No. 2 mixed, 55@57¼c; No. 2 yellow, 55½@58¼c; No. 2 white, 55@57¼c. Oats—No. 2 white, 38@38½c; No. 3, 37@38c. Barley, 51½@56c.

Hay Markets Beginning to Weaken.

Hay markets are beginning to weaken in spite of light receipts. Demand has been limited right along and pastures are cutting more of a figure in the market. New crop alfalfa is offered for shipment from the southwest in another week or two at prices considerably lower than the spot market.

Egg Receipts Extremely Heavy.

Receipts of eggs for three weeks have been extremely heavy, with the total at the four leading markets setting new records. Storage holdings at these points have accumulated rapidly in spite of a broad demand and are now ahead of the extremely large holdings on this date a year ago, when there was a record accumulation in the country as a whole. Prices have held well since the storing season started in earnest and they are not expected to sag much unless heavy receipts are maintained long enough to pile up larger storage stocks than operators think necessary for the winter market.

Latest Quotations: Kansas City: Eggs, firsts, 21½c; seconds, 18c. Live poultry—Broilers, 45c; heavy hens, 22c; roosters, 13c; ducks, 25c; geese, 16c.

Denver—Eggs, 26@27c. Live poultry—Hens, 19@20c; springs, 28@30c; broilers, 30@35c; roosters, 7@8c; ducks, 20@25c; turkeys, 27c.

Butter Market Slumps.

The butter market declined sharply in the last few days. Tension in speculative activities at Chicago was a factor in sustaining the market at that point during the last days of April. Passing of this situation allowed the market to sag. Combined receipts at the leading cities for the last two months have run heavier than in the corresponding period of any recent year but demand is exceptionally broad, so that all fresh receipts have been absorbed, and cold-storage holdings have been steadily decreasing.

On the Chicago futures market butter standards for May delivery are quoted about 5 cents below the spot market. Prices for 92-score fresh butter on May 3 were:

Chicago, 35c; New York, 37c; Boston, 37½c; Philadelphia, 37c.

Potato Prices Recovering.

Potato prices have been recovering in the last few days, due largely to the fact that the remaining supply is in stronger hands. The movement of old stock is falling off, but new stock is increasing and now amounts to about 120 cars daily. Total shipments are unusually heavy for this time of the year, although they have decreased in the last few weeks. Northern sacked round whites are now quoted at $1.35 to $1.50 f. o. b. Northern shipping points, $1.85 to $2 in the Chicago carlot market, and $1.80 to $2.10 in middle western cities.

A practical ration for a sow suckling pigs is one part corn, kafir, milo, feterita, or barley, and three parts skim milk, by weight.

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THE PERFECT POTATO DIGGER

You harvest your ENTIRE CROP when you use the Dowden Digger. Does the work in half time and with half the help. Cuts labor costs in two.

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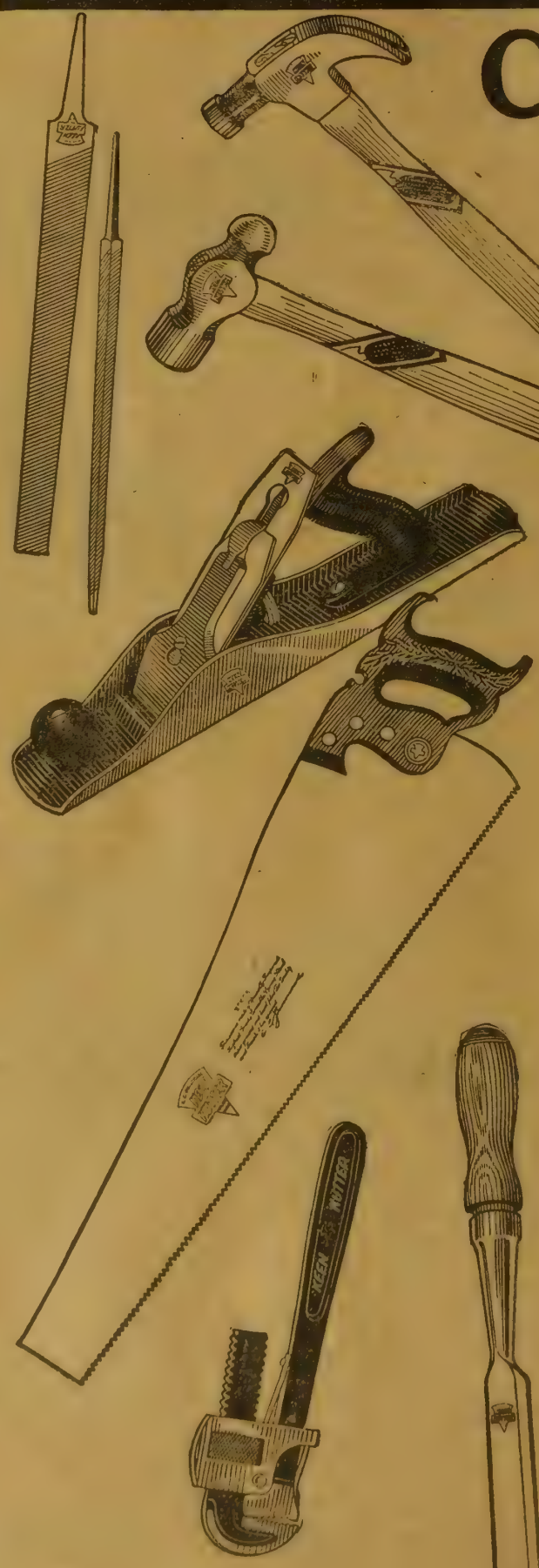

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Keen Kutter Tools make good day by day for men who earn their living using tools. They prove their practical value just as fully to men who may use tools only seldom, but who need real service then! Sold by leading Retailers everywhere.

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Trade Mark Reg. U.S. Pat. Off. —*E. C. Simmons*

Simmons Hardware Co.

Our prices on *Keen Kutter* Tools have been reduced. Ask your Hardware Store about today's values.

KEEN KUTTER

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Vol. XXIV. *Denver, Colorado, June 1, 1922.* *Semi-Monthly*

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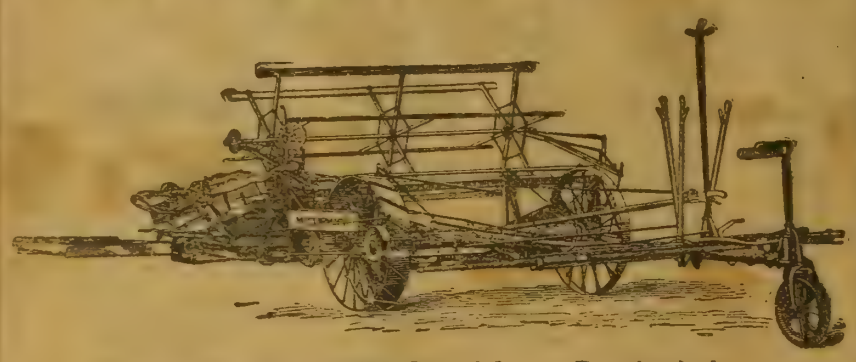
"Listening In" on World's Conversation

McCormick and Deering Push Binders and Headers



The push binder (McCormick or Deering) is a combination machine which can be equipped with either a header elevator or binding attachment.

The combined machine is ideal for large grain growing districts, for which it was designed, because it can be adapted to the conditions found in different years. One year the grain may be in such condition that binding would be the most satisfactory way to harvest it; the next year it may be better to head it. The combined machine is adapted to either condition simply by changing the one attachment for the other. Either binder or header attachment, or both, can be furnished.

McCormick and Deering push binders and headers are very efficient. They are made in 10-, 12- and 14-foot cuts and the generous use of roller bearings makes them surprisingly light of draft. Both machines can be operated with horse or tractor power. (Tractor hitch furnished on special order). Only one man is required on each machine.

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Time to Spray Apples.

There is probably no other phase of orchard work that pays so well for the time employed as that of controlling insect pests. The codling moth probably takes 50 per cent of the apple crop of Larimer county each year. This loss could be largely, if not almost entirely, eliminated if proper attention were given to this phase of the work.

Usually three applications of arsenate of lead used at the rate of one pound of the powder to 50 gallons of water will give very satisfactory results. The first of these applications should be made just after the blossoms fall. It may be begun when 90 to 95 per cent of the blossoms are off and should be completed within a period of five to eight days. The object in this application is to get poison into the blossom end of the apple to destroy any small worms that attempt to enter at this point. It has been found that fully 60 per cent of the worms enter through the blossom end. So if this application is thoroughly made, 60 per cent of the worms can be killed with the one application.

The second application should follow within three weeks from the time the blossoms are 95 per cent off the tree. At this time the first generation worms are numerous. The object should be to thoroughly coat the sides of the small apples with the poison.

There are two generations of the codling moth in this section. The second generation of small worms are entering the fruit usually about the first week in August. A third application, if made at this time, will protect the fruit against this second brood. While some growers do not make this application, it is usually advisable to do so.

All of these applications should be made with the greatest of care. Probably more people fail to get the results they desire on account of lack of thoroughness than from any other cause. The trees should be sprayed from different angles and the operators should occasionally stop their work and go back to see that they are getting poison into 100 per cent of the blossoms, or to see that they are covering 100 per cent of the surface of the fruit. The average sized tree in an orchard that is in full bearing cannot be thoroughly sprayed with less than from six to ten gallons of liquid.

Anyone having fruit trees and failing to give the spraying proper attention is not only showing poor business judgment, but is doing his neighbor an injustice, and incidentally, such a practice is contrary to the laws of the state.—George M. List, Colorado Agricultural College.

Wheat Condition Improves.

Colorado winter wheat improved three points during the month of April, and promises a possible crop of 17,830,000 bushels this year, according to the May 1 State-Federal Co-operative Crop Report. This forecast is based upon the May 1 condition of 80 per cent, which is equivalent to about 15 bushels per acre upon 1,173,000 acres, the estimated area left for harvest. Mostly due to a long dry period, in some sections dating from last July and August, winter wheat suffered the unusually heavy abandonment of 20 per cent of the acreage sown last autumn. The average abandonment for the past five years has been 9.6 per cent. The crop harvested last year amounted to 16,152,000 bushels, an average yield of 12 bushels per acre on 1,346,000 acres. Unless conditions are exceptionally favorable from now on, the final average is not likely to be over 12 bushels per acre this year. The non-irrigated farming sections of the northeastern and southeastern counties of the state suffered most heavily from drouth, wind and other winter damage. The average per cent of abandonment for the northeastern counties, where the heaviest acreage is located, is about 25 per cent. Heavy precipitation occurred in these counties and practically all over the eastern slope during the period from April 15 to May 1, bringing the moisture conditions of the state nearly up to normal and, though late, greatly improved all wheat left for harvest.

The forecast for the rye crop of the state is 995,000 bushels, based on a condition of 85 per cent, which means an average yield of about 11 bushels per acre on 90,000 acres, which is 98 per cent of the rye acreage harvested for grain last year. The condition of the rye a year ago was 95 per cent of normal, the season was unfavorable and the yield was only 11.5 bushels per acre, totaling 1,058,000 bushels.

The soil condition for Colorado on May 1, as indicated by the average of reports, improved 11 points over April 1, and was 95 per cent of normal as compared with 102 per cent May 1 last year and 110 per cent, the condition on May 1, 1920. Moisture conditions in the western part of the state have been favorable throughout the past fall and winter, while the eastern plains section has generally been very deficient. The present good condition is due to heavy precipitation since about April 15, and especially during the last week of the month.

Removing Carbon From Engine.

Quite frequently, especially during busy seasons, the car, truck or gas engine is used for a long time without taking the time to remove the carbon from the cylinders, the result being a loss of power and inefficiency on the part of the motor, together with increased gasoline consumption.

By using the following method the cylinders can be quickly cleaned of carbon almost as satisfactorily as if they had been taken apart and scraped.

Remove the spark plugs, and into each cylinder put about half a tea cup full of kerosene. Then turn the engine over slowly for two or three minutees. Allow the engine to stand for two or three hours, then dip each spark plug in gasoline, which will make the engine start easily, and put them back in the engine. If there are priming cups on your engine, put a little gasoline into each, or if there are no priming cups, choke the engine through the carburetor.

Start the engine and allow it to run for several minutes when you will find that practically all the residue carbon has been loosened and blown out with the exhaust.

There will be a dense black smoke coming out with the exhaust for some time after starting the engine, which is only the loosened carbon and will cause no harm.

Always leave the spark plugs out while the kerosene is standing in the cylinders, as they sometimes become shorted if allowed to remain in contact with the kerosene.—Emil C. Wahlström.

Broken Gears in Car.

When a driving pinion is injured, a hard knocking will be heard in the rear axle and usually there will also be unpleasant jerking. This is an indication that teeth or parts of teeth have been broken off and are being caught between the gears, where they are causing more damage. The thing to do is to bring the car to a standstill at once and investigate. Most rear axles are accessible through the differential housing, and it is easy to remove some of the grease and discover the extent of the damage. Quite often by removing the broken parts of the teeth from the gears it is possible to drive considerable distances without further damage unless whole teeth are out. Driving the car after the noise is heard may result in a ruin of a master gear, whereas the loss of a pinion only would be the extent of the damage if the car is promptly stopped.

Farm Machines Manufactured.

Farm machines to the value of $536,945,000 were manufactured in the United States during the year 1920, and all but $6,626,000 worth were sold at home, according to Department Circular 212, "The Manufacture and Sale of Farm Equipment in 1920," just issued by the United States Department of Agriculture. Of the many types of machines, only the self-rake reaper was in greater demand abroad than in this country.

Plows and listers were manufactured in the largest numbers, the total for the year being 1,361,578. More than 580,000 cultivating machines were made, 472,000 planting machines, 411,000 haying machines, and more than 200,000 gas tractors. Fewer than 30,000 gas tractors, according to Department figures, were made in 1916; and estimates from other sources show that in 1910, just a decade before this investigation was made, only 4,000 were manufactured. Although a few firms refused to give data on their business, enough complied to make the figures dependable.

The circular may be obtained free of charge by addressing the Department at Washington, D. C.

When the blossom petals are from one-half to two-thirds fallen, apple trees should be sprayed with lime-sulphur and arsenate of lead solution for codling moth, curculio, canker worm, apple scab, and cedar rust

Western Farm Life

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Colorado Farmers Are Marketing Their Own Cabbage

CO-OPERATIVE SELLING OF CROP PROVING SALVATION OF GROWERS

By George C. Wheeler.

FROM the small beginning made the summer and fall of 1920 the Colorado Cabbage Exchange has grown to an organization of 800 growers, banded together to market their cabbage and other vegetables as the product of a single factory. Last year it handled more than half the total Colorado cabbage crop and this state is the third largest producing state.

It was organized to meet a dire emergency, as is true of many of our most successful co-operative marketing movements. Although regrettable, it is nevertheless true that co-operation, which means most of all unselfishness—working for your fellow man as well as yourself—usually comes as a the result of just such conditions as gave that group of Colorado cabbage growers the grit and determination to fight their organization through those trying weeks of 1920. Defeated though they finally were after maintaining for forty-six days the exchange price of 60 cents a hundred for their product, they had done enough business despite the organized and uncompromising fight of the shippers to make their efforts futile, to prove that farmers can successfully market their own products. The men who went through this fight also were convinced that only by a carefully worked out plan of co-operative marketing could they expect to get a square deal.

Exchange Organized to Meet Emergency.

The 1920 cabbage buying season opened with a fight between organized and independent shippers, and while these groups were fighting without regard to the effect upon the growers, who were the most interested parties, the price of cabbage went to 30 cents a hundred, less than cost of production, as a result of the price slashing between these groups of rival shippers. In calling the meeting at which the cabbage exchange plan was proposed, organized shippers expected to gain the support of growers in their fight. The exchange plan, briefly stated, provided for farmers having some part in determining the price of their cabbage. It was virtually collective bargaining with a contract for accredited shippers to sign with the organized growers.

Although trapped into entering the agreement, it was not done in good faith for the organized shippers saw looming ahead a co-operative movement which might easily lead to a definitely functioning marketing association. In a short time more than 700 growers had become members of the farmers' organization. A growers' committee was appointed to deal with shippers. Failing in their efforts to use the growers' organization to put the independent shippers out of business, the organized shippers declared open war on the exchange. They finally won by breaking the exchange price, but as later developments showed, it was an empty victory, for the growers were just learning how to fight.

Price-Cutting Did Not Stimulate Market.

Growers of cabbage who were forced into this fight in order to save their business, found that for years cabbage, like many other farm products, was marketed through a strange system, when considered as other businesses are conducted. Their business might be likened to a huge factory made up of a large number of independent units, putting out a superior product. When the time came to sell the product the many individual owners or manufacturers called together a group of agents and asked them to find buyers. These agents, among whom there existed the keenest competition, had no interest in the factory. Their profits came from commissions and the more they sold the more they made. Price cutting was the prevailing method of getting the business. The shippers were making the price and sending out quotations. Then they bought the farmer's cabbage to fill the orders they had taken.

Excessive competition among shippers was most disastrous to producers and a queer feature of the business was that price cutting did not stimulate the market. A buyer in a distant market, Kansas City or other large eastern, or southern center, was afraid to order on a falling market. The housewife who went to market to buy cabbage failed to find it and bought something else. Gradually, despite the large potential demand for the product, cabbage would be crossed off the list of the jobber and wholesaler because of the uncertainty of what might happen before his orders could reach him. And meanwhile the grower saw his crop spoiling in the field because the system of marketing made for such unstability that the crop could not be moved at any price.

Farmers Must Sell Own Product.

The farmers' only remedy against the evils of this system of marketing his products is to handle the selling end of his business himself just as any other manufacturer does. It can only be done through co-operative effort in which the whole cabbage crop is sold as the product of one factory.

The Colorado Cabbage Exchange is the sales department of the Co-operative Farmers' Exchange, Inc., a co-operative association incorporated under the laws of the state. Its headquarters are at Brighton. To W. C. Hood, Jr., goes the credit for originating the sales plan and he has been general manager of the association and gives his whole time to it. He was one of the fourteen men who bore the brunt of the first fight the season of 1920. It was financed in the beginning to the extent of $1,220 in the form of loans from growers. Finding that the shippers would not aid in maintaining a fair price, in fact, were deliberately breaking the price to put the farmer organization out of business, men were sent to the jobbing centers to investigate marketing conditions, and September 28, 1920, the exchange shipped its first car of cabbage. By October 14 fifty more had been shipped and orders taken for seventy, all on the 60 cent basis. Later when the price was broken as a result of the onslaught of the organized shippers, many orders were cancelled. In all, eighty-four cars were sold.

Even though defeated in their effort to maintain the price through the season, the growers found some of the profits of marketing could be saved and, what was more important, had been able to maintain a fair price and had learned that their products could be moved to consuming markets and sold under most adverse conditions.

As a business organization the exchange had been able to repay the $1,220 loan and closed the season with a small net balance in the treasury despite the fact that unusual expenses in the form of marketing investigations had been met. These investigations showed that the jobbers and brokers were performing a necessary service at a reasonable profit and would gladly welcome a stabilized market such as co-operation could bring about.

Shippers Paid Dear for Advertising.

Proof of the charges made last year that shippers tempted growers to break their contracts by offering more than the market price for cabbage, that they sold at less than the exchange price and deliberately glutted jobbing markets in order to break the price and cause the exchange serious financial loss, is gradually coming to light. In a news letter sent to growers February 1, Mr. Hood says: "A Greeley shipper claims a loss of $3,300 on thirty-three cars, all he shipped last season. For the month of August alone a well known Denver shipper showed a loss of more than $9,000. One of the largest Denver shippers admits a loss of more than $25,000 for the season. These things show the bad condition of the cabbage market at times. But the principal reason shippers lost so much money is that they continually bought cabbage at higher than market price." "It is clear now to most growers," continues Mr. Hood in this letter, "that under the old system very little cabbage would have been sold during the bad slump between August 10 and September 5. Much of the early crop would have rotted in the fields. When you are told that opposition shippers paid more than exchange growers received, remember that it cost them more than $100,000 to do this advertising. They spent this money to break your organization and make you dissatisfied. Remember also that opposition shippers almost completely stopped shipping during the slump, and at the same time the exchange shipped more than 300 cars, cleaning the fields of early cabbage."

Attempt to Change Traffic Rules.

A new form of attack has developed this spring. During the slump the exchange moved the 300 and more cars by "rolling" them toward jobbing centers before they were sold. Under the conditions it was impossible to close orders because of the price uncertainty and the distance the cars had to move, but cars could be sold if delivery could be made from a nearby center by diverting the cars being "rolled." An attempt is now being made to make one free diversion the limit, a fee of $10 a car for the second, $15 for the third and local freight for later diversions. This would effectually prohibit making steady sales to consuming markets under conditions such as prevailed last season.

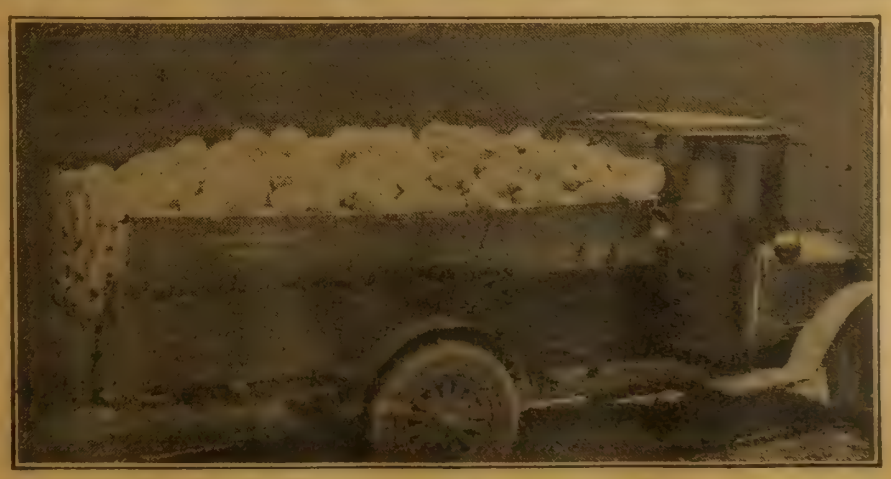
If the railroads attempt to put this rule in operation the exchange will carry the fight higher up, for the diversion privilege is a most important factor in stabilizing the market in the various consuming centers. With the proposed charges in operation it would be prohibitive to divert cars from overstocked markets and growers would suffer disastrous slumps due to a temporarily glutted market, while other markets might be actually short.

Plans for Coming Year.

The exchange is prepared to greatly widen the scope of its operations the coming season. Its grower contracts now cover potatoes and mixed spring vegetables. Fully a hundred growers in the Denver territory are under contract and a shipping dock will be established at Denver. In an effort to standardize its products it imported 325 pounds of Copenhagen and Hollander varieties of cabbage from Denmark and sold to growers at cost. In its spring announcement to the produce trade Snowy Range cabbage is listed; Colorado potatoes, Snowy Range brand, shipped in new, even weight branded sacks for the first time in Colorado; mixed vegetables carefully graded and packed at the new Denver platform, and Mountain Iceberg head lettuce, Snowy Range and Bear brands. The lettuce will be shipped through reciprocal contracts with the Colorado Co-Operative Lettuce Association, Inc., of Buena Vista.

This young co-operative marketing association has weathered the most serious storms such as beset practically every co-operative movement of its kind. With loyal support and backing from member growers it should gradually become a fixed institution.

Working out and putting into practice co-operative marketing of farm products is in line with the best thought in the United States as the practical way to improve conditions for farmers. President Harding made co-operative marketing one of the features of his message to Congress. "Something more than tariff protection is required for American agriculture," he said. "... the main the remedy lies in distribution and marketing. Every encouragement should be given the co-operative marketing plan."



Truck load of cabbage pulling up to loading platform.

Western Farmers Study Results of Hays Tests

EXPERIMENTS SOLVING LIVESTOCK PROBLEMS OF PLAINS REGIONS

George C. Wheeler.

RESULTS at the Fort Hays experiment station in western Kansas indicate that steers wintered on silage graze as well or better than cattle carried through the winter on dry roughage. The year's results as given out Round-Up Day, April 29, show an advantage of 16½ pounds to the steer in favor of the silage-fed steers at the close of the summer of 1921.

A special study is being made of the best methods of utilizing the forages grown under plains conditions in maintaining stock cattle and sheep through the winter season. Straw and the various sorghums are receiving particular attention. Five problems were under consideration in the year just past and upon which reports were made at the Round-Up meeting.

Silage Steers Graze Best.

In wintering steers the relative value of silage and dry forage was under consideration. This was a continuation of the studies made the preceding year starting in December, 1920, and which had been continued through the summer of 1921. The steers went through the first winter with one lot receiving silage and cottonseed cake and the other straw and cake. The silage-fed steers came off the grass November 14, 1921, weighing an average of 668.9 pounds, and the straw-fed steers 649.8 pounds. They had been on pasture, which was mostly buffalo grass, 162 days. An average gain to the steer had been made by the silage-fed cattle of 229.5 pounds and the steers wintered on straw and cake had gained 213 pounds. The wintering period was 135 days. The silage cattle gained 67.1 pounds and the steers in the other lot 61.7 pounds for the winter of 1920-21.

For the winter just passed the silage-fed steers were put on a feed of sorghum silage and cake, while the others were fed sorghum hay and cake. The dry-forage cattle came through the winter and up to the day of the meeting weighing 825.8 pounds, while the silage-fed steers weighed 819.1 pounds, or gains of 176 pounds and 150.2 pounds, respectively. This might appear to be an adverse result from the standpoint of silage, "but," said Dr. McCampbell in explaining the results of this test, "we had hard work keeping the gain down in the silage lot, as we preferred them to go on grass lighter than the other steers to test out their grazing qualities following a winter of silage feeding."

The steers in each lot received a pound of cottonseed cake daily and the ones wintered on straw and cake the previous winter consumed an average daily feed of 21.61 pounds of sorghum hay and the others 43.10 pounds of sorghum silage. It is the purpose to carry this test through this summer and another winter, and close with the end of the pasture season of 1923, when the cattle will be about three and a half years old.

Methods of Feeding Cane.

All the Hays tests are along the line of seeking practical and economical methods of raising livestock under the existing conditions. A series of tests were reported on which were planned to determine the relative feeding value of cane with the heads on and the heads off, and as silage or fodder. The main purpose of this test in feeding cane in the four ways was to get definite information as to the relative value of an acre of cane in the shock and in the silo, and the feeding value of cane seed fed from the shock and from the silo. Forty mature cows that had suckled calves through the summer were divided into four lots for the test. Approximately two pounds of cottonseed cake were given to every cow in the test in addition to the roughage.

In ranking the four lots of cows on the basis of thrift and general appearance at the end of the winter season the results favored cane fodder with the heads on, cane without the heads coming second, cane silage with heads on next, and cane silage with the heads removed last. From the acre standpoint the cows with silage having heads on required .325 acre to the cow to grow the feed for the period of the test, the group on silage with heads removed 17 acres, group on cane fodder with heads .407 acres, and fodder without heads .730 acres to the cow.

Cows Need a Little Protein.

The tests in wintering stock cows on cheap feeds such as are produced in plains farming showed that cows can be carried through on straw alone, but lose weight, and it is advisable to add some other feed, preferably one rich in protein. The results the past winter and the winter before show that cows can be wintered on silage alone without loss of weight, but here again it is suggested that some other feed rich in protein be added. In the test of the past season the substitution of 6.6 pounds of alfalfa a day to the cow for 22 pounds of silage increased the average daily gain .25 of a pound and previous tests have indicated that a pound of cottonseed cake is equivalent to 3½ pounds of alfalfa hay. In like manner substituting 6.65 pounds of alfalfa for 4.2 pounds of straw in the ration increased the daily gains to the cow almost .20 of a pound. The cows were wintered in five groups, the first group getting an average of 24.59 pounds of straw to the cow daily; group two, 20.41 pounds of straw and 6.65 pounds of alfalfa; group three, 8.64 pounds of straw and 47.71 pounds of silage; group four, 57.71 pounds of cane silage; and group five, 35.71 pounds of cane silage and 6.58 pounds of alfalfa hay.

Age Heifers Should Calve.

Another test upon which progress only could be reported was that touching on the influence of age of calving upon heifers and the later development of their calves. Considerable information had been acquired on this point in connection with a previous experiment in methods of feeding heifers during their growing and developing period, but now one has been planned for the specific purpose of getting at the facts. It began in May, 1921, when forty-eight heifers calved the spring of 1920 were divided into two groups. Heifers in group 1 were bred to calve the spring of 1922, when two years old. The heifers in group 2 will be bred to calve the spring of 1923 when three years old. The plan is to continue to test seven years.

Ewes Do Well on Cake.

Contrary to the prediction of some sheep men, the ewes receiving cottonseed cake instead of alfalfa made the best gains and lambed as well as the ewes fed alfalfa. The ewes were divided into two groups of forty mature ewes each. In one lot the ration was 4.3 pounds of kafir stover daily to the animal and one pound of alfalfa hay, and in the other 6.1 pounds of kafir stover and .33 pounds of cottonseed cake. At the end of the test period the cake-fed ewes had gained 12.2 pounds apiece and the alfalfa-fed ewes 5.2 pounds.

A test was made also to show the value of linseed oil meal as a protein supplement in wintering ewe lambs. One group of lambs received a ration of 2.6 pounds of kafir stover and 2 pounds of silage to the lamb daily, and in the other lot the ration was 2.9 pounds of kafir stover and .17 pounds of linseed oil meal. The lambs were under test 133 days and the ewes in the first group showed an average loss of 1.4 pounds, while the lambs in the group fed oil meal with the kafir stover showed an average gain of 6.7 pounds. The oil meal was evidently a very satisfactory source of the necessary protein in the ration.

Rancher Boosts for Purebreds.

Fully four hundred western Kansas farmers attended the Hays meeting despite the bad weather. It was the tenth annual gathering and has become a regular feature toward which plains farmers look each spring. One of the outstanding addresses was that by M. R. Baker, a ranchman from the extreme west end of the state. Mr. Baker explained what his idea of getting purebred stock and purebred seed had meant to him in his twenty-five years of experience. He declared that the first time he made a direct comparison, calves from a purebred bull with no better care than was given calves by scrub bulls and from the same kind of cows, outsold the scrubs $10 to $15 a head. His experience with pure seed was just as striking. He obtained his pure seed from Hays experiment station or from neighbors who had got their start there and the advantage in the crops was fully as great as he had found from using purebred sires.

President W. M. Jardine spoke of the need for and advantages of diversified agriculture. L. C. Aicher, a former Colorado boy, now superintendent of the Hays station, emphasized the fundamental function of the work being done in the effort to ascertain facts of value to farmers and stockmen of western Kansas and the whole plains region.

"Listening In" on World's Conversation

RADIO NEWS DISSEMINATED BY BOYS AND GIRLS OF FARMRAD CLUBS.

"LISTENING in" on a country telephone may have its thrills, but members of boys' and girls' clubs who "listen in" on the conversation of the world with their radio receiving sets have an interest which comes not from neighborhood gossip, but from getting the morning report of the markets, the weather forecast, and crop estimates for all parts of the country.

In a number of states club members within receiving distance of broadcasting stations located at the state college of agriculture or elsewhere are receiving information that takes some of the risks out of the business of farming. They post this information in conspicuous places, so that neighbors may make use of it. The work demonstrates the usefulness of the radio as a piece of farm equipment.

Colorado boys and girls are right up with the times in getting into the radio game. "We have five Farmrad, or radio clubs in Boulder county," writes Mrs. Josephine Lee Ferguson, county club agent. "The interest that has been and is being taken in this work is clearly and forcibly illustrated by an incident that occurred last week. I was calling on prospective club members and their fathers. I say fathers, because we were lining up boys for livestock clubs. At one farm I made a brief visit, as it was 6 o'clock in the evening, and asked the parents to consider the matter and phone me. As the father stood in the doorway holding the screen open with one hand, he said, 'Well, we'll think about it. Maybe we'll give the boys a pig and we might get 'em a calf, but, say now, if you'd come here with some kind of a proposition about this here wireless thing, why we would take you up right now.' I told him very quickly that I had that very proposition and that we had seventy boys in radio clubs, each boy having made complete, or in part, a simple receiving set. It is seldom that an extension worker leaves a country home seeing such a look of keen disappointment as came into that man's face. His last remark was, 'Say, now, why didn't you come here an hour ago.'

"Since putting in these receiving sets in the country homes, it is quite common to hear such conversations as this: 'Have you sold your hens yet?' 'Poultry is going up,' 'How do you know?' 'Heard it last night on the wireless,' 'What did they say last night about the weather tomorrow? We were thinking of taking a trip, but want to be sure it is going to be a good day.'

"A few days ago one of my leaders came into the office and demanded to know what I thought of a certain statement that had been made by radiophone the night before. I had not heard it, but I realized that if I kept abreast of my local leaders and club boys, I must 'listen in' oftener.".

Mrs. Ferguson points out that these simple instruments are changing the individual's thoughts, raising the moral and mental status of the community and giving boys an incentive to work to a definite end. The radio clubs offer clean, wholesome, constructive activity. "After being an active member of a radio club, a boy is a better mixer, better thinker and better liver," said Mrs. Ferguson. "I'm not at all sure that Webster would approve of my using that word in that way, but it expresses just what I mean.

"The average cost of the boys' sets has ranged from $5 to $10. A livestock club member may fail to go to his club meeting, the crop boys may even turn down a tour, but the radio club members are on hand every time."

Counties in New Jersey, Montana, and Colorado have clubs that received wireless messages last season. In Kentucky, Nebraska, and several other states organization is under way. The expansion of the radio has been limited because of lack of simple printed instructions, but the recent distribution of circulars by the United States Department of Agriculture on the making of receiving sets has been helpful to the boys and girls. Through members of pig, dairy, corn, and other clubs who are receiving daily market information and the estimated crop production, the entire family and the community as well may be benefited.

Light Cattle in Demand.

A decided demand for light cattle is developing in our present-day markets. No longer are heavy steers selling at a premium over light well finished cattle. During the past year yearling steers have as a rule outsold older and heavier cattle, with the latter often being a "drug on the market." The following headings of the daily market reports in recent issues of the livestock papers are a good index to the comparative demands for the different classes of cattle: "Light Cattle Enjoy Better Call"; "Heavy Stuff Dull"; "Yearlings in Good Demand"; "Light Steers Holding Up, Heavies Dull."

A market paper early last spring featured the sale of some choice heavy steers which sold for $9.25 a hundred. In commenting on this sale the writer said: "Had they weighed 300 pounds less they probably would have realized $10 a hundred. Some of the buyers would not look at them on account of their great weight." In comparison with the above, the following quotation is taken from a later issue of the same paper: "$12.15, highest price of the year, obtained for twenty-two Texas-bred Hereford yearlings averaging 1,055 pounds—fed by John G. Imboden & Son, Decatur, Ill." And again from the same issue: "$12.00 next high for the year obtained for fifty branded horned Hereford yearling steers—fed by B. F. Myers & Son, Dexter, Iowa."

A lesson can well be learned from these market reports as they in turn reflect the increasing demand of the consumer for small cuts of beef. For this reason and the fact that land values are gradually increasing, the tendency will be more and more toward the production of high quality cattle that will finish out easily and economically at an age that will show a profit to the breeder and feeder. In other words, baby beef.

Let's Eat More Meat.

Howard Leonard, president of the Illinois Agricultural Association and executive committeeman of the American Farm Bureau Federation, was recently chosen as president of the National Live Stock and Meat Board, organized for the purpose of increasing the consumption of meat. It is planned to raise funds for the campaign by collecting 10 cents a car on all live stock marketed, 5 cents to be collected from the seller and 5 cents from the buyer. Extensive research will be instituted to ascertain the truth about meat as a human food. These facts will then be presented to the public. The program will be of special interest to the stockmen of the nation.

An Organized Breeding Center in the Making

CO-OPERATION IN DEVELOPING THE INDUSTRY TO BE THE WATCHWORD

Alvin T. Steinel.

CO-OPERATION in the development of the purebred livestock industry, with Littleton as the center of activities, is the plan of an organization projected by Allyn Tedmon, county agent of Arapahoe county, Colorado. The plan includes a local exhibition of purebred livestock of all classes, to precede the fall circuit of fairs and shows. Several of the herds belonging to breeders in the Littleton district make a circuit of these exhibitions. It is believed that a local showing, at the outset, will have a tendency to bring the breeders in closer touch with each other, as well as to announce to the public that world beaters in cattle, hogs and poultry, are about to set out on a tour of triumph.

County Livestock Association Planned.

Buyers coming into the Littleton district will find their wants much more easily filled if there is a central organization and a permanent secretary to direct them. There are other things to say in favor of such an organization, but aside from the business feature the greatest advantage lies in the mutual helpfulness derived from closer personal association of the breeders themselves. It gives them a broader interest in the community and the community learns to know them better, so that when the awards, sent broadcast by radio from the state fairs, come in through the ether, all Littleton will be at the bulletin board in front of The Independent office to see how the Herefords, Shorthorns or Durocs are faring in cornbelt competition at Sedalia, Springfield, or Des Moines, or at the International, Royal or National Western shows.

Not long ago it was the pleasure of the writer to be the scribe for a small party comprising Roud McCann, Director of Extension of Colorado Agricultural college; W. H. Olin, supervisor of agriculture for the Denver & Rio Grande Western railway, and County Agent Allyn Tedmon of Arapahoe county, who made a tour of a few of these breeding farms. Rather than spend just a few minutes on many places only three were selected for longer visits, in order to get some idea of the quality of breeding stock kept. The present article does, however, mention others than the three places visited, with the explanation that much more could have been written about each had there been time for a visit.

Visit Famous Hereford Farm.

Wild Acre Farm, the home of J. D. Canary and his famous Repeater Herefords, was the first place visited. This ranch is located near Wolhurst on the Denver-Colorado Springs highway, about three miles south of Littleton. The foundation for the Canary herd came from Harris & Sons of Missouri, who are among the foremost of American developers of the whitefaces. Repeater 63d was Canary's first sire of the strain and when he was bought by the Littleton breeder, the price, $8,100, was the record paid up to that time for any sire of a beef breed.

Mr. Canary's friends said he was foolish for paying such a big price for a bull even for a grand champion, but his judgment was more than vindicated, for the following season Repeater bulls at the Harris auction reached the unheard of figure of $25,000 for one individual of the family. Repeater 63d lived up to his name and reputation. His first calf was sold in the ring for over $9,000. He has consistently bred true. Manager W. W. Hanson of Wild Acre Farms says Repeater 63d has never produced a cull. A look through the pens on the ranch disclose as handsome and even a bunch of young stuff as one might see in any Hereford show. Without stretching a point, anyone who knows even a bit about the whitefaces will agree, after a visit to Wlid Acre Farm, that it is like going to an exhibition. Repeater 63d is now nine years old and he numbers among his progeny Repeater 66th, who is already a junior champion and will make a strong contender for the grand championship at the Royal next fall.

The female side hasn't been overlooked either. There is Miss Repeater 36th, a coming 3-year-old, that has been shown twenty-one times and has never stood lower than third in any class shown. She will make the aged class next fall at the shows and will offer hot competition for the best matrons of the breed.

One hundred head of such registered whitefaces on one ranch are worth going miles to see. The equipment is of the best and the arrangement of barns and corrals is convenient as it can be made. Location on the transcontinental railroads and on a main highway gives Wild Acre Farm a great advantage in accessibility.

Producing seed stock for livestock improvement breeder's job.

Outstanding Shorthorn Herd.

Just west of Littleton, hardly a mile from the court house, is located one of the great Shorthorn farms of the west, the Maxwell-Miller Ranch, formerly of Routt county, Colo. Removal from Routt county was prompted by the need for a more central location with good transportation facilities, for the Maxwell-Miller cattle have become world-famous, and they must be where they can be seen, and where the show herd can be more readily moved out and in.

Here the junior member of the firm, Terry Miller, whose rise as a breeder has been the cause of so much comment in Shorthorn circles, showed us around. Princely Stamp, the National Western grand champion of 1921, is now one of the heaviest bulls of the breed, weighing 2,600 pounds. His calves show the quality of their famous sire. Here we were priveleged to see a recent importation, a Scotch bull who will be heard from this fall when the Maxwell-Miller herd goes on the fair and show circuit. The cattle are being put in condition for a long tour by Jack Lawrence, a proficient herdsman who loves the Shorthorns. The state fairs of Missouri, Illinois, Iowa, Nebraska, Wyoming and Colorado are on the route for this year and it is safe to say that cornbel breeders will know they have been up against some real competition from Colorado, where beef cattle attain a bloom and perfection that cannot be surpassed anywhere in the world.

There are fifty breeding cows in this herd, the outstanding feature being the uniformity of the cattle, young and old. It is quality with a big Q. This is not an idle statement, but the show records bear witness to its truth. It is the word of the best Shorthorn judges of America that we are giving here.

This completed the morning's visits. County Agent and Mrs. Tedman entertained the party at dinner, the guests including Judge Flor Ashbaugh, county attorney, and Mr. Ed F. Burden, chairman of the board of county commissioners.

Off to the foothills (Turn to Page 11)

Market Outlook for Farm and Ranch Products

SUPPLY AND DEMAND CONDITIONS MORE FAVORABLE FOR FARMER

Edited by Glenn G. Hayes.

PLUNGING tactics never are safe, but there are times when it is entirely wise to expand, to proceed with confidence and initiative while at others contraction of operations and cautious procedure are necessary to avoid trouble.

The evidence steadily accumulates that we will soon be ready to enter a period of expansion, if we have not already entered it, in which enterprises, whether agricultural or otherwise, can go ahead fortified in the belief that they are moving with the current of business affairs. The latest records of industrial output continue to show a big demand for goods of nearly all kinds. April steel production was nearly 3 per cent greater than in March; pig iron made a healthy gain, and the unfilled orders of the Steel Corporation increased substantially. Auto and truck production thus far in 1922 was never exceeded but once in the same period of the year. All previous records for amount of construction started were broken in April.

Bank clearings, which measure business turnover, were 15 per cent larger in April than in the same month a year ago, and more than double the highest figure ever reached in April before 1915. Nor can the increase be accounted for on the score of higher prices for goods and securities.

Expansion Now a Safe Policy.

Commodity prices are gradually moving upward. Bradstreet's index advanced nine times out of the last eleven months and was 10.2 per cent higher on May 1 than on June 1 last year, when it reached low point.

Credit conditions do not indicate that business expansion has yet begun, however, as interest rates are still easing. But since the United States now has about one-third of the world's gold supply, thus providing a foundation for a large volume of credit, it is not unlikely that considerable expansion could be financed without affecting money rates.

In the field of agriculture itself, the outlook has attractive features. This country is short on sheep and its product, wool; there is, apparently, a slight shortage of beef cattle, and thus far the profitableness of hog production has not brought about any undue expansion. Our dairy cows and poultry are turning out a lot of butter and eggs, but the consumptive demand for both is at a gratifyingly high level. The world-wide situation promises a good year for the American wheat grower, the corn surplus has been largely absorbed by an increased rate of consumption and even oats are gradually coming back in market value.

Thus we can go through the entire list of leading agricultural commodities and find sound reason for belief that supply and demand conditions and market prices will favor the farmer as he has not been favored for two years.

Plain Cattle Are Scarce.

Plain steers as well as the butcher cows and heifers with which they compete in the dressed beef trade are exceedingly scarce at present. The result is an unusually narrow spread in prices, a situation which has developed at this season of the year with almost unvarying regularity.

Last fall country buyers were reported to be favoring the lower grades of thin cattle, but the present market bears little evidence that such was the case, as common steers are said to be scarcer than ever and it appears now that the change of country demand at various markets a few months ago was greatly exaggerated.

Smaller Cattle Run Expected.

Receipts of cattle around the market circle have been decreasing during the last ten days, offsetting a decrease in the demand for beef. Net changes in prices on the hoof have not been marked. Quotations are practically the highest of the year. The belief that market supply will shrink at least a little further before long is prevalent as the run for several weeks has been above the seasonal average, whereas the available supply of steers in the country is thought to be below the average.

Steady Demand for Stock Cattle.

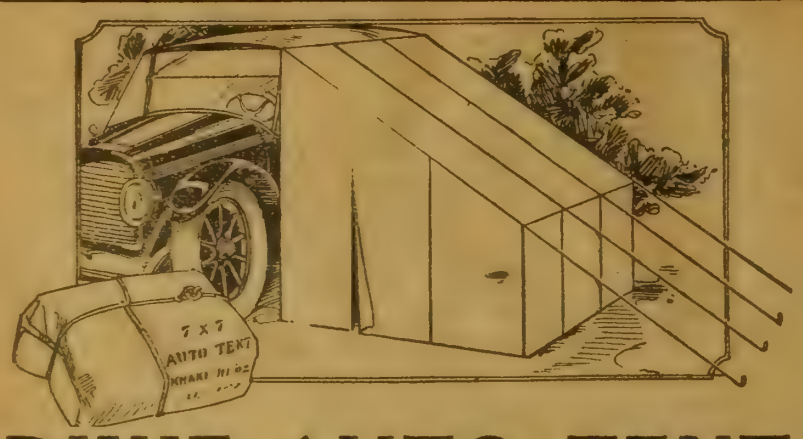
With but two exceptions, the shipments of stocker and feeder cattle from twelve leading markets since the middle of January have not gotten far on the upper or lower side of 50,000 head weekly. Prices have been gaining rather steadily and are at the highest level of the year. May usually is the high month, so that the market is running true to form.

The spread between stocker and feeder prices on the one hand and fat steers on the other is abnormally narrow, favoring the breeder rather than the feeder.

The movement of cattle from the Southwest to northern pastures is now at its maximum, but (Turn to Page 14)

Recent Range of Livestock Prices at Our Principal Markets.

Cattle—	Denver.	Kansas City.	Omaha.
Choice and prime heavy steers (1100 lb. up).	.....	$8.15@ 9.00	$8.00@ 8.75
Good heavy steers	7.25@ 8.00	7.60@ 8.40	7.50@ 8.25
Common heavy steers	6.25@ 7.15	6.85@ 7.40	6.75@ 7.40
Good light steers	7.50@ 8.20	7.65@ 8.40	7.75@ 8.35
Common to choice butcher heifers	5.00@ 7.90	5.50@ 8.00	5.50@ 8.00
Common to choice butcher cows	4.00@ 6.65	4.50@ 6.75	4.85@ 7.10
Bologna and beef bulls	3.25@ 6.25	4.00@ 6.00	4.00@ 6.00
Canners and cutters, cows and heifers	2.50@ 4.00	3.00@ 4.85	3.25@ 4.75
Canner Steers	3.25@ 4.40	3.75@ 4.75	3.75@ 4.75
Common to choice feeders (1000 lb. up)	.....	6.00@ 8.10	5.75@ 8.25
Common to choice stocker steers	4.75@ 7.50	4.75@ 8.25	5.50@ 8.35
Common to choice stocker cows and heifers	3.50@ 5.50	3.85@ 6.50	4.50@ 6.50
Hogs—			
Top of Market	$ 10.65	$ 10.75	$ 10.50
Bulk of Sales	10.00@10.40	10.00@10.75	10.00@10.40
Heavy (250 lb. up)	9.50@10.00	10.20@10.55	10.00@10.35
Medium (200—250 lbs.)	10.00@10.65	10.30@10.70	10.10@10.50
Light (150—200 lb.)	10.00@10.40	10.20@10.75	10.20@10.50
Smooth packing sows (260 lb. up)	9.00@ 9.50	9.00@ 9.75	9.00@10.00
Stock pigs	8.50@ 9.00	9.50@10.75	9.50@10.50



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White or khaki, 8 or 10-oz. fabric. Living compartment 7x7 feet; flap 7 feet wide covering top of car and extending 3 feet on opposite side. Easily adjusted to fit any 5 or 7 passenger car.

8-oz. white, complete..... *$8.45* 8-oz. khaki, complete *$10.45*
10-oz. white, complete..... *$9.65* 10-oz. khaki, complete.... *$12.65*

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For Roadster.....*$5.95* For Touring Car.....*$6.95*

A New Slip Cover

Save the New Upholstering in your car, or make new seats by covering the old ones—cover the seats, doors and kick pads completely. A very durable fabric, with leather arm rests.

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Ford Coupe size.....$5.75 Ford Sedan size.....$9.75

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To Prevent Abortion in Cows

No Pills, Tablets, Vaccination or Injection

Just mix one pound of GERM-A-TONE with fifty pounds of salt and put the mixture out in a box or trough where all cattle can have free access to it —that's all.

Protect All Stock at the Same Time

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Farmers' Service Bureau

Readers are invited to make generous use of this department. Questions regarding any branch of farming, livestock production, animal diseases, legal matters pertaining to the farm, homestead inquiries and the like cheerfully and promptly answered by letter and through the magazine. Address all communications to SERVICE BUREAU, WESTERN FARM LIFE, Denver, Colorado.

Where to Get Water Wheel.

Where can I get a good water wheel? —O. J., Arizona.

Write to Pelton Water Wheel Company, San Francisco, Cal. This firm makes wheels of all sizes. In writing give as nearly as you can the amount of water available, drop which can be obtained, and the amount of power you wish to develop.—G. C. W.

Gassing the Prairie Dogs.

We understand using poisoned oats kills prairie dogs, but how about the carbon bisulphide used to get dogs missed by the poison. Is it dangerous to use?—F. D. A., Idaho.

Carbon bisulphide is a very volatile liquid evaporating into a heavy, poisonous gas which settles to the bottoms of the burrows. To use it simply saturate a cob or something else which will soak up the liquid and roll it into the hole and close it. The gas is very inflammable and never should be handled near an open light or fire.—G. C. W.

School House Community Center.

Can two members of a school board in a third class district close the school building for all purposes that mgiht be detrimental to the conducting of a school in the building?—R. H. B., Montezuma county, Colo.

The law provides that the board of directors is the custodian of the school property and has the right to determine the use of such buildings other than for school purposes. A decision based on the law giving authority to school boards in this matter is as follows:

"If the board sees fit to permit the use of the school house for a dance, it has the right to do so. I think that a school house should be used for a community center, and know of no reason why there should be objection to same if the board takes care of the property in a manner satisfactory to the electors of the district, and that the use of the school house is not permitted for improper purposes."—Katherine L. Craig, State Superintendent of Public Instruction.

Mexican Beans or Summer Fallow.

A number of farmers of Curry county, New Mexico, who had intended to fallow their land this summer and sow to wheat next fall, are now discussing the idea of planting the land in Mexican beans and cultivating well this summer. Then after the bean crop is removed, sowing the land to wheat. As this is a new experiment with the farmers here, we would like to have your advice as to which would be likely to be the better plan.—G. P. Miller, county agent.

Every crop uses up moisture. The winter wheat will do better on the clean fallow since it will have the water which otherwise would have been used up by the bean crop.—E. R. Parsons.

Cane for Silage.

Can cane be raised for silage in this country? The altitude is something over 7,000 feet. We raise alfalfa successfully, also oats, spring wheat, barley and potatoes.—E. M. J., Wyoming.

Cane is a warm weather crop and best adapted to conditions much farther south and lower altitudes. Corn would have more chance to make a silage crop under your conditions than cane, and you do not mention corn as a crop successfully grown.

Considerable attention has been given to Russian sunflowers as a silage crop where conditions are unfavorable for corn. Your experiment station at Laramie can supply you information on sunflowers for silage.—G. C. W.

May Be Abortion Disease.

A cow in our herd has lost her calf, about six and a half months along. She is in good condition, in fact, almost fat. Some say that is the trouble. Will it make the other cows lose their calves to have this cow run with them? We have three yet to calve. This cow has not cleaned well. What is the best thing I can do. I am feeding Kow-Kure.—Summit county, Colo.

It is always the safest plan to consider a case of this kind as a possible result of abortion disease and keep the cow from the rest of the herd. If you know nothing about this disease it would be a good plan to read up on it. The veterinary division of the Colorado Agricultural College has bulletin material on the subject which should be in the hands of all persons having cows. They are sent free on request. The disease is not an easy one to control and veterinarians are giving it a great deal of attention.

The remedy you are giving may not do any good, but it will do no harm to give it a fair trial.—G. C. W.

Profit From Upland Farming.

Is there more profit and pleasure in farming un-irrigated land than in farming under the ditch with abundant water. On the place where I am now located there is a lot of magnesia in the soil. When I have had it planted to corn I got a healthy stalk, but no ears. What would be the best crop to plant in this soil.—C. W. F., Logan county, Colo.

Some magnesia soils are good for crops, but others, where there is a deficiency of lime, are not so good. You should send some of your soil to the Colorado Agricultural college at Fort Collins and have it analyzed. Where there is plenty of lime it makes the water hard and prevents an excess of magnesia being dissolved in the soil solution. If your soil needs lime, phosphate of lime would not only mend matters, but also stimulate the crops to produce better.

It may be, on the other hand, that your land does not need lime, and in this case it must require humus, which you could supply by plowing under green crops. Fall rye is about the best for this purpose. You could sow it this fall, about forty pounds to the acre, and plow it under the following spring. In any case, humus from manure, or green crops, will help your land.—E. R. Parsons.

Poisoning Gooseberry Worms.

What can I do to prevent the worms from injuring my gooseberries? It is the one drawback to getting a heavy crop of berries each year.—Mrs. E. J. B., Chaffee county, Colo.

If this is the ordinary European currant worm, which very commonly devours the leaves of gooseberries, it can easily be controlled, if taken in time, by spraying the bushes with arsenate of lead solution. Two-thirds of an ounce of the powdered form, or ten level teaspoonfuls to a gallon of water, gives a solution of about the right strength. Of course, it is not desirable to spray the bushes when the fruit is almost ready to pick, but usually the damage from these worms begins much earlier. They are voracious eaters and oftentimes will defoliate a whole bush almost before the damage is noticed. Where there is danger from these worms, spray the bushes as soon as the foliage is well out. Too often one waits until the worms have appeared and done considerable damage before applying the spray.—G. C. W.

Controlling Common Asparagus Beetle.

Some kind of insect like a fly, or beetle, is seriously damaging the tips of our asparagus. Can anything be done to control this insect?—L. J., Jefferson county, Colo.

It is probably that this insect is the common asparagus beetle which for several years has been reported in the vicinity of Boulder and also in the neighborhood of Denver. This is a very serious pest to the asparagus grower, but is a comparatively new introduction into Colorado.

Chickens and ducks feed freely upon these beetles when they have access to them. One of the best methods of control is to cut all the plants early in the season, forcing the egg laying on the new shoots, which also are cut frequently so as not to allow the eggs to hatch before the shoots are used. One plan is to allow some of the shoots to grow upon which the eggs will be deposited and the young beetles allowed to hatch. They are then poisoned by spraying these shoots with an arsenical spray, a large percentage of the beetles thus being destroyed in the larval stage. These shoots may be cut and burned to destroy the larvae after the eggs have hatched. —C. P. Gillette, State Entomologist, Colorado Agricultural College.

Do Rats Fear Rabbits?

Is there any truth to the saying that rats will not stay where tame rabbits are kept?—P. K., Weld county, Colo.

Experienced rabbit growers say there is nothing to this superstition. Unless other methods are employed to keep the rats in check they will occupy premises where rabbits are kept.—G. C. W.

State Farm Bureau News.

The Colorado State Farm Bureau is taking an active part in the tax revision program in which all farm organizations are joining. The state organization was represented at the recent meeting of the Committee of One Hundred in Denver by J. D. Pancake, president, and E. R. Bliss, chairman of the taxation committee. Mr. Bliss assisted by H. L. Lowell of Castle Rock, has been gathering information from the county farm bureaus and other sources on the tax situation and was of material assistance to the executive board of this body of which he is a member. Mr. Bliss will continue his investigations and asks the co-operation of every county farm bureau in making his work in this committee more effective. The following is Mr. Pancake's outline of the actions taken at Denver meeting:

Report on Taxation Meeting.

"A committee of one hundred citizens representing the different sections of the state, also the different industries, was called to meet at Denver with the Civic and Commercial Association, Wednesday, May 10. The avowed purpose of the meeting was to emphasize the necessity of economy and equalization in payment of taxes. The governor and all ex-governors were members of the committee. Each one of the governors made the statement that it was most impossible for any man to so simplify and eliminate bureaus and boards in state government on account of their being so strongly entrenched and so many friends coming to their support. The spirit of the committee was to see that every industry was well represented and that particularly the farmers and the livestock men should find a large representation on the executive board.

"At first, an executive committee of seven was chosen and afterwards changed to nine, so that real dirt farmers could have sufficient representation. J. D. Pancake, president of the State Farm Bureau and E. R. Bliss of Greeley were present, representing the Colorado State Farm Bureau and the farmers' interests. Mr. Bliss was chosen as a member of the executive committee. All the speakers declared that economy and equalization should be the watchword. The governor especially strengthened these two words. The executive committee contemplate not only making recommendations to reduce boards and bureaus at the State Capitol, but they also expect to make recommendations relative to elimination and reduction of county officials. For instance, devising some method of having all taxes collected by one official instead of the many. They also ask the people of the state to watch with care the construction of roads, and if any waste or irregularities occur, they will notify this executive committee. It is also anticipated that if real tangible property now pays 95 per cent of the taxes, that some method will be devised whereby tax exempt securities, salaries and so on, will bear a fair burden of government. As the laws now stand, a farmer owning his land and chattels is taxed because everything is in sight, while some person drawing a salary probably five times as much as he, bears scarcely any of the burdens of government. Yet, the salaried man enjoys probably more of the benefits of the government than the farmers.

"It is also expected that some method will be devised whereby an income tax will be advocated that owners of mortgages, municipal bonds and all tax-free securities will pay some taxes on the income from the same. The State Farm Bureau is expecting to have some man working at this problem continuously. They now have a representation on the executive committee and funds will be needed so that the farmers may have a fair share in devising new tax systems for the state. It behooves every farmer in the state to get in behind this proposition so that he may have a large hand in shaping of our state taxation. This one fact is fundamental, that it is not the purpose of this committee to in any way impair the functions of state or county government, but to simplify and render them more economical. We hope that every member of a farm bureau will feel that he is one connected with those who represent him in helping to put across this most useful piece of work."

Need of County Action.

Several county farm bureaus have already held their taxation meeting and sent in their resolutions to Mr. Bliss. It is important now that every county farm bureau call a meeting of all industries and organizations interested in tax revisions and send to Mr. Bliss recommendations based on conditions as they exist in the various counties. A permanent tax organization should be formed and a vice president of the state organization named from each county.

Membership Campaign Progressing.

The good results obtained last week show that the farmers of Colorado are resolute in their determination to stabilize their industry and put it on a paying basis. In spite of the financial straits in which he finds himself, every farmer who is well informed is ready to co-operate with his neighbor in a service organization that is national in its scope. Solicitors are obtaining unusual results in nearly every community worked. Twenty-five members in two days is a record made in Pueblo county by one solicitor. Four solicitors started in Weld county to work over the outlying territory preliminary to starting the drive under the direction of J. M. Rodgers. In one day, nine members were obtained from eleven solicited, which is a fair percentage as obtained in Weld county.

The moving picture "Spring Valley" has more than come up to expectations in Weld county. It has been shown to large audiences and has been pronounced by operators and patrons to be a film of exceptional merit. Many compliments were heard on its portrayal of rural life and farm conditions, and the old and young alike enjoyed its many humorous features. One audience of over one hundred waited until midnight to see it completed. The film will be run another week in Weld county before going to Fremont.

Lubricating oil is cheaper than new machinery.

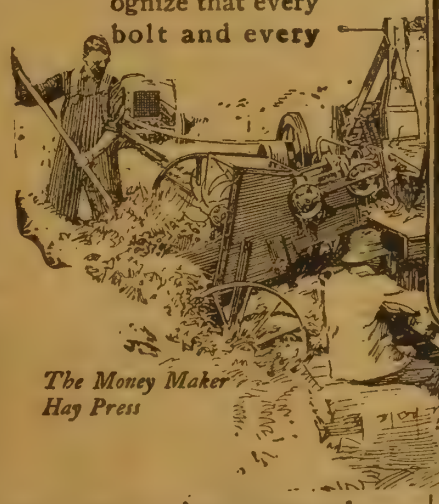
How To Accomplish More Work In One Day

TO be popular now-a-days, farm tools must not only do their work well, but they must do it with less man power. Working along these lines, Swayne, Robinson and Company of Richmond, Indiana, have been unusually successful in the design of the Money-Maker Hay Press for the Fordson.

Strength is secured by putting into each press the highest quality of material and the necessary quantity of material worked up in correctly designed parts. Take, for example, the gears that must withstand intermittent severe strains. The most carefully compounded semi-steel is used in casting them, and in addition, they are given rigid, permanent alignment in a continuous iron bed plate and heavy bearings.

Neither in the making of the gears nor in the construction of the frame is any sacrifice made to meet competition. It has been the Swayne Robinson policy for eighty years to build the best tools possible without regard to the price at which competing tools might be sold. Fortunately for farmers, the policy has made sales so large that quantity production of Money-Maker machines has kept the price down to the lowest level.

Examine a Money-Maker Hay Press carefully and you will recognize that every bolt and every nut serves an important and very definite purpose. The frame (made without "piecing") of full length steel rails is an example of reinforced steel truss rigidity. The plunger of sturdy all-steel design moves on two rollers. Four strong relief springs are provided to protect the foot-feed from breakage.



The Money Maker Hay Press

Many who use the Fordson for baler operations, purchase the "Save-a-man" self-feeder to increase the output. This is a special attachment available only for use with Money-Maker hay presses. It increases the capacity of the hay press from 25 to 50% and does away with the man on the feed table.

The Oliver Two-Way Sulky
Fordson power is available in plowing to the irrigation farmer with the Oliver Two-Way Sulky. Power lift, easy running.

Oliver Single Bottom Sulky
For deep mouldboard plowing in trashy conditions with the Fordson. Similar in construction to world famous No. 7 gang.

Fordson Disc Plowing
Oliver Fordson special disc plows have set a new standard. They penetrate the toughest soils, yet are light running.

Roderick Lean Automatic Harrow
Fitting the seed bed the Fordson way with the Roderick Lean Automatic Tractor Disc—a special Fordson Harrow.

Good Work With Roller Pulverizer
Final Fitting of the seed bed with Fordson power and the roller pulverizer has meant more bushels for many farmers.

Roderick Lean "Cutmore" Mower
Attaches without changes to the Fordson. Power taken direct from drive worm. Makes a one-man outfit with Fordson.

The Amsco Tractor Drill
Tractor speed and accuracy utilized by the Fordson owner with the Amsco special drill. Force feed makes positive planting.

The Amsco Two-Row Cultivator
Cultivating corn is easy for the Fordson farmer with the Amsco Cultivator—special for the Fordson. Made for hard work.

Money-Maker Ensilage Cutter
Fordson silo filling with the Money-Maker done quickly and cheaply. Strength and scientific design give perfect work.

Wood Bros. Individual Thresher
The Wood Individual Humming Bird Threshing and Fordson make short work of threshing. All grain is saved.

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WESTERN FARM LIFE

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Federal Warehouses for Grain Advocated.

A very large proportion of the difficulties of grain marketing center around the matter of storage. The crop is harvested, threshed, and forced on the market during a period of two or three months. It cannot pass into immediate consumption. In other words, a crop which it takes the world a year to consume is forced on the market in a few months' time. To be merchandised as consumptive demands develop there must be storage. The U. S. Grain Growers' marketing plan recognizes this need and proposes to control storage and merchandise the product through the year instead of dumping it as is now the practice.

Thomas A. Edison has just proposed a plan for enabling the producer to retain control of his crop involving a system of government storage warehouses. The plan was recently outlined to a special committee of the agricultural bloc considering the matter of farm credits. It contemplates the issuance of a farm currency through a central federal bank. This will be loaned to farmers for one year, repayable at the rate of 1 per cent a month and secured by a lien on agricultural products on the basis of 50 per cent of their value. The plan of course requires carefully supervised warehousing under government control. No interest is to be charged, but producers would be required to pay the overhead expenses of maintaining a chain of government warehouses in which the crops used as collateral for loans could be stored. The government already exercises a certain control over some of the large warehouses of the country in private ownership, so the idea is not entirely new.

Having a reasonable amount of farm storage is often a great advantage to the individual farmer. It relieves him from the necessity of rushing his wheat to market when there is a congestion on the railroads and frequently a shortage of cars and local elevator space. Grain farmers able to do so should by all means endeavor to get away from the necessity of forced marketing of their grain.

The proposed plan of government warehousing is well worthy of careful consideration and the agricultural bloc committee are mindful of the interests of agriculture in looking into the proposition.

Beef Production in Colorado.

Beef production is one of the great industries of Colorado and the mountain states. This is true because of the natural grazing provided by the forest reserves, public ranges and the rough land on many of the farms. Beef cattle must be depended on to consume the unmarketable hay, fodder and straw produced on every farm. As time goes on beef production as a farming industry will necessarily increase. Big cattle men cannot monopolize the beef-making industry. Even at the present time the [illegible] part of our beef is produced by the men with [illegible] herds of 150 animals or less, or farmers who [illegible] only five to fifteen cattle each year. The beef [illegible] is not down and out and cattle will continue to be one of the leading products of our farms. A bulletin of exceptional value to the producer of beef, prepared by Professor C. L. Bray, has just been issued by the Colorado Agricultural college. This bulletin, entitled "Beef Production in Colorado," should be in the hands of every man in any way interested in handling beef cattle. It will be sent free on request. Address, Extension Service, Colorado Agricultural College, Fort Collins, Colo.

Reclamation Work to Expand.

With a greatly enlarged reclamation program about to be developed as a result of the passage of the McNary reclamation bill, the proposed closing of the Denver offices seemed most illogical. Reclamation work is a matter of nation-wide importance, but Denver is the natural center of a large amount of work already under way and with the greatest project of all, the conservation and use of the waters of the Colorado river in irrigating a western empire, about to become a reality, there is all the more reason for maintaining the Denver headquarters. It is a business proposition and politics should not be allowed to enter into the matter at all.

It has now been definitely announced that the order to abolish the Denver office and concentrate all the administrative work in Washington has been rescinded. Secretary Fall had determined to combine the two offices because he felt that the work did not justify maintaining a western headquarters, but representations made by the committee headed by Governor Shoup sent to Washington to protest, and the statement from Senator McNary that his bill would be pushed to enactment led the Secretary to change his mind.

This decision is most gratifying to the West. There is a growing feeling that there is too much centralization, resulting in removing matters of more or less local importance from their natural centers of control and involving them in a system of bureaucratic red tape thousands of miles away.

Senator Phipps has introduced two or three amendments to the McNary bill, one providing that bonds issued by a reclamation district shall not be exempt from taxation, and another providing that congressional approval shall be granted before any project is started. The last amendment has to do with providing for an equitable division of the waters of Colorado in order that the state may have a chance to obtain its share of the reclamation work.

Grain Growers to Start Work Soon.

J. D. Pancake of Loveland, Colo., who is a member of the National Board of Directors, has just returned from Chicago, where he has been for the last sixty days working on reorganization. Mr. Pancake has been made director of organization for Colorado and Wyoming and will start work at once in those two states. He reports unusual demand for organization work among the grain growers. Demands have already been made for several counties in Colorado. Organization work is going forward rapidly in other states and membership is increasing at the rate of nearly one thousand weekly. Forty farmers in Iowa and fifteen in Kansas are devoting full time to the organization work.

Value of Good Bulls Demonstrated.

One of the outstanding educational features of the Heart of America Dairy Show held in Kansas City, June 5 to 10 in connection with the National Holstein convention and annual meeting, is the Government exhibit illustrating the value of good bulls in bringing about higher production in dairy herds. Of the twenty-four booths, sixteen will show dairy practices, six the marketing of dairy products, and two the use of milk as food.

The need for improving dairy cattle is the dominating idea of the entire exhibit. How this improvement can be brought about through the use of good pure-bred sires is strikingly shown by reproductions in color of actual farms and herds where such sires were used for a number of years. Contrasted with this improvement there is shown a run-down farm with its low-producing herd of scrub cows resulting from the use of scrub bulls.

The advantages of cow testing and bull associations and proper feeding of dairy animals also will be shown; the requirements for milk production; the necessity for eradicating tuberculosis, and the progress of the accredited-herd movement since its organization in 1917; how to help eliminate undernourishment among children; numerous ways of utilizing milk and whey; and how to produce clean milk.

Dairymen able to attend this convention and show will receive much of inspiration and knowledge in connection with their chosen vocation.

Dairymen Opposed to Filled Milk.

Dairymen are vitally concerned in the bill known as the "Oiled Milk Bill," introduced by Representative Voight. Filled milk has become an article of wide use, particularly among the poorer classes. The bill forbids the manufacture and shipment in interstate commerce of skimmed milk, to which cocoanut oil has been added to take the place of the butterfat. The bill has been favorably reported by the House Committee on Agriculture. The resolution passed by the National Grange opposing this fraudulent product is of interest in this connection. It reads as follows:

"Whereas, There has been developed a large business in a product sometimes called "filled" or "bogus" milk; and

"Whereas, The business which takes the animal fat out of the milk and substitutes a vegetable fat lacking in vitamines is a fraud upon producer and consumer alike; therefore, be it

"Resolved, That we are opposed to the manufacture and sale of filled milk."

It is not entirely a selfish matter for the consumer is concerned as much as the producer. The bill may come to a vote in the near future and dairymen and others who favor this legislation would do well to write to their members of Congress setting forth their views.

Essentials of Co-Operative Success.

In this issue is a story of the success Colorado cabbage growers have attained in marketing their own products. It has valuable lessons for those interested in any co-operative enterprise. In this case co-operative marketing was born of a dire necessity to save the business. But it would have failed if the true spirit of co-operation had not existed among the growers and a recognition of the fact that merchandising of commodities calls for business training which few farmers posses. In replying to an inquiry by the Agricultural Review as to the things most needed to insure co-operative success, J. R. Howard, president o fthe American Farm Bureau Federation, made the following reply:

"The three things most needed to insure the success of the co-operative movement are 'brains, brains and more brains.' Co-operative marketing is not a farmer's job. It is the most highly competitive merchandising job in the world. The farmer has a right to organize and, in a general way to direct or supervise, but not one farmer in a million has the training or the native ability to do the technical job itself. We must be sure that we are organized on safe and sound principles, that there is a demand for co-operative marketing and that the farmer is going to stick by his organization—then, with the aforementioned ingredients, success will be reasonably assured."

Kill the Grasshoppers.

Preventing grasshopper damage by systematic poisoning is no longer a theory or experiment. It is a practical method of grasshopper control. The poisoned bait formula has been carefully worked out and tested over and over again, and in many badly infested sections literally tons of the material have been scattered and grasshoppers poisoned by the millions. You can buy grasshopper insurance just as you can buy insurance against fire, or wind, or hail. The policy does not come written on white paper, but canned and labelled "Colorado Poison Grasshopper Paste." This material is being supplied at cost by the State Entomologist. A gallon can of this concentrated grasshopper poison, costing $1.25 f. o. b. Fort Collins, will mix up with 100 pounds of bran in making the bait. In some localities it can be obtained locally as a result of organized effort. The little hoppers are hatching out now. The time to get them is while they are young and before they have begun to do serious damage.

"Most good farming nowadays is done above the collar," says George Martin, an Iowa farmer. This is simply saying that head work is becoming more and more an important factor in farming success. It does not mean that muscular labor is unnecessary, but it is not the determining factor. "The one thing you have got to have to be a good farmer," continues Mr. Martin, "is the one thing you have got to have to be a good anything—and that is intelligence."

Farm cost accounts should be interpreted carefully. Do not drop an enterprise because the figures show it to be unprofitable. Find what is wrong with it and try to correct the condition.

Good cows are not the only essential in profitable dairying. The farmer must be as good as the cow. He must feed and care for her so she can produce to her full capacity.

From the Nation's Capital

BILL SUBMITTED PROVIDING MEANS TO MEET LIVESTOCK CREDIT NEEDS OF COUNTRY.

E. E. Reynolds.

UNDER the administration of Secretary Henry C. Wallace the United States Department of Agriculture is rapidly developing into an agency of great practical usefulness, not only to the farmers and stockmen, but to the transportation companies, the middlemen, and the consumers. All the activities of the department are being directed to the work of eliminating lost motion in agricultural production, transportation and distribution.

Undoubtedly the greatest advance in the department's activities is in marketing methods under the direction of the Bureau of Markets and Crop Estimates. The bureau is actively co-operating with the marketing officials of the various states in a movement to correlate state and Federal marketing work and permit overlapping of activities; to get each state in the proper relation as regards marketing with every other state.

Growers in the leading fruit and vegetable producing states want their own state marketing officials to co-operate with those of the states in which the big consuming markets are located, in the gathering and distribution of crop and market information and in the distribution of produce in such a way as to prevent market gluts, and insure the shippers against losses due to lack of the proper routing information.

It is believed that marketing problems will never be worked out satisfactorily until there is close co-operation between the states and Federal marketing agencies, and this movement is meeting with much encouragement from all sources.

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Bureau of Markets Develops Radio.—The radio market news system, developed by the Federal Bureau of Markets, while only a few months old, now covers the entire country. Radio stations broadcasting market news in co-operation with the Bureau of Markets are in operation in many important cities. Denver has a broadcasting station which covers a large part of Colorado by radiophone.

The Federal Bureau of Markets and the state marketing agencies are co-operating in working out an arrangement whereby the state and Federal market news will be handled so that the one will supplement the other.

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Livestock Credit Through Federal Farm Loan Board.—The most recent addition to the long array of rural credit bills awaiting congressional action is the "Federal Livestock Act," prepared under the direction of Eugene Meyer, Jr., director of the War Finance Corporation, and introduced in the Senate by Senator Arthur Capper of Kansas. It is supplementary to the War Finance Corporation, and is designed to meet the needs of the livestock industry.

This bill provides that the Federal Farm Loan Board shall divide the United States into not less than five and not more than ten livestock districts, to be determined with due regard to the needs of the livestock industry. Upon the application of five or more eligible livestock loan companies in any one district, the Federal Farm Loan Board shall proceed to organize a Federal livestock finance corporation in the district.

The Federal livestock finance corporation shall be under the control of seven directors, three of whom shall be appointed by the Federal Farm Loan Board and four elected by the member corporations. All four directors must be residents of the livestock district in which the corporation is located. The capital stock of each finance corporation is to be sold to livestock loan companies, and the secretary of the treasury is required to subscribe to the capital stock a sum equal to 25 per cent of the amount subscribed. The government stock would later be retired.

No livestock finance corporation can begin business with a subscribed capital of less than $1,000.000, or with a paid-up capital of less than $500,000.

The corporation is given power to rediscount eligible livestock paper; to make loans and advances to its member corporations on their promissory notes secured by eligible livestock paper; to buy and sell government bonds; to act as a depository of government funds; and to act as fiscal agent of the War Finance Corporation.

Each Federal livestock corporation may have outstanding at any one time its collateral trust bonds in an aggregate amount of not more than twenty times its paid in capital stock. Such debentures may mature in not less than six months nor more than three years from date of issue, and shall bear interest rates as the directors of the corporation, with the approval of the Federal Farm Loan Board, may determine. The dividends on stock and interest on the bonds of each corporation are tax exempt. The rate of discount is fixed at not more than 1 per cent in excess of the rate of interest upon collateral trust bonds.

The membership of the Federal Farm Loan Board would be increased from five to seven members, one of the members so appointed being designated as livestock commissioner, and shall be the chief executive officer of the board in all matters arising under the provisions of the act. Not more than three of the six members appointed by the President shall be of the same political party.

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Farmers' Union Rural Credit Bill Introduced.—The National Farmers' Union rural credit bill, introduced by Senator Norbeck of South Dakota, creates a corporation known as the National Farmers' Finance Union, to have an existence of twenty-five years. The capital stock of the union, amounting to $200,000,000, is to be provided by the government. The finance union is to succeed the War Finance Corporation, taking over the capital stock of the corporation, and having transferred to it all the assets of the corporation. The aggregate loan limit is placed at $1,000,000,000, and the union's bonds are to be tax exempt.

—x—

Farm Bloc Urging Rural Credit Legislation.—The farm bloc in Congress is making an effort to secure some sort of farm and livestock credit legislation before Congress adjourns. Recently representatives of the agricultural organizations, including the National Grange, American Farm Bureau Federation, and Farmers' National Council, were invited to a conference with the Senate agricultural bloc, for the purpose of discussing the rural credit situation. Later Chairman Capper of the farm bloc announced the designation of Senators McNary of Oregon, Jones of Washington, Ladd of North Dakota, Kendrick of Wyoming, Harrison of Mississippi, and Swanson of Virginia as a committee to study the various rural credit bills, with a view to enabling the bloc to center its support upon the one which appears to best meet the requirements of the farmers and stock raisers for credit.

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Agriculture Wants Better Representation on Federal Farm Loan Board.—There has been a feeling among farm organization leaders that agriculture ought to be represented on the Federal Farm Loan Board by a farmer-minded man. When Asbury F. Lever resigned as a member of the board the friends of Dr. T. C. Atkeson, of the National Grange, presented his name to President Harding as a man thoroughly able to represent agriculture. The President, however, nominated Governor Robert A. Cooper of South Carolina who has strong political support, but if he is in any way qualified to represent agriculture the fact has not yet been made public.

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Selling Poultry at Auction.

A rather unique event in the disposition of breeding poultry stock is to occur at the Romoco Poultry Farm near Littleton, June 3. It is nothing more nor less than an auction sale in which the stock will be sold to the highest bidder, just as has been so long the practice in selling purebred livestock. This is the second sale conducted at this farm, which specializes in Rhode Island Reds. The stock consists of breeding fowls which have been used in producing hatching eggs. The new stock is coming on and this method is taken of giving others an opportunity to get a start in choice breeding stock.

Father is glad he has finished working his son's way through college.—Reno Gazette.

The Rural Household

Questions about home problems promptly answered by letter and through the magazine. Letters from women containing helpful suggestions for improvement of rural life are always welcome. Address all communications to Mary G. Collopy, Editor Home Department, Western Farm Life, Denver, Colo.

My Prayer.

Not that there be less to bear,
Not that there be more to share;
But for braver heart for bearing,
But for freer heart for sharing.
Here I pray.

—Sharlot M. Hall.

My Neighbor's Story.

"You people were late to our club meeting," said Mrs. Brown to Mrs. Atkins. "Yes, Mr. Atkins brought in two men for supper and we stopped to visit with them a bit," answered Mrs. Atkins. Mrs. Brown's face looked as though she thought of unpleasant experiences as she said: "That's one thing I won't stand is to have Mr. Brown bring in extras for meals."

"Oh! I don't mind it," said Mrs. Atkins. "If I haven't pie enough to go around, I open a can of peaches and get out the fruit cookies, which I keep put away in a jar. I feel paid for my work as I see the look of pride on Mr. Atkins' face as he says, 'Mr. So-and-So, this is my wife. Mama, Mr. So-and-So will have dinner with us. Can I help you any?' My sister, who lives in town, regrets that she would not allow her husband to welcome his friends in his home. Now he takes them out to the club, while she eats alone."—Editor's note—Contributed by a reader in El Paso county, Colo.

What Do You Say?

I wonder if some of the feminine readers of Western Farm Life can help me with my cake difficulties. It seems that every cake I make fails. I have been advised to use less sugar and shortening, to use water instead of milk, to make the batter so stiff that it drops from the spoon in lumps, and a number of other things, all the way from the order of mixing ingredients to a special brand of shortening. Most of these things I have tried with the same result—still it falls. I have a reliable oven thermometer on my range.

Particularly would I appreciate a reliable sponge cake recipe adapted to our altitude of almost 8,000 feet. There must surely be some ranch women who have met these things and can tell me how they experimented with their recipes until they found them satisfactory. I should be more than grateful for this information, as in all other things I am an experienced cook.—Mrs. A. C. P., Laramie, Wyo.

The chief difficulty with cake baking in high altitudes is the use of **too much** baking powder. This will seem, at once, very reasonable when you consider that the higher we go, the less atmospheric pressure we have. We use baking powder, or other leavening agents, to offset the effects of air pressure. Try using less baking powder until you have determined the correct amount. Also use slightly less sugar.

Your question concerning the sponge cake depends upon the recipe you are using. A sponge cake recipe which includes baking powder would be subject to the same regulations stated above. Such a sponge cake requires the same oven temperature as a butter cake. However, a genuine sponge cake does **not** contain rising properties, but is made light by the expansion of the air which has been beaten into both the yolks and the whites of the eggs. This sponge cake must bake in a very slow oven. I hope you will like this recipe:

Yolks of six eggs, one cup sugar, one tablespoon lemon juice, one-fourth teaspoon salt, grated rind one-half lemon, whites of six eggs, one cup flour.

Beat yolks until thick and lemon colored, add sugar gradually, and continue beating, using egg beater. Add lemon juice, rind, and whites of eggs beaten until stiff and dry. When whites are partially mixed with yolks, remove beater, and carefully cut and fold in flour mixed and sifted with salt. Bake one hour in a slow oven in a deep pan.

Standardization of Poultry Flocks.

For years, women's clubs in rural districts have been interested in culling of poultry flocks. Women in Logan county, Colo., are now learning more about mating. In co-operation with the Logan County Poultry Association, Miss Suzanne Thompson, home demonstration agent, recently arranged for a special meeting at Iliff. Professor Jamieson of the poultry department of the Agricultural college was present to assist with the work. Practical demonstrations were held in the morning with two flocks. These were followed by a dinner in the large community hall, which is maintained by the club women and the Farmers' Union.

During the noon hour very valuable talks were given on the following subjects: Mating, Breeding, Inbreeding, Line Breeding, Mendel's Law, Prepotency, and the Value of Purebred Stock.

In the afternoon, the poultry tour was continued. One woman wrote: "We visited five farm flocks. Mr. Jamieson told us the requirements for mating Rhode Island Reds, single and rose comb; Anconas, White Leghorns, and Barred Rocks. After the males were judged, the female that should be mated was discussed as to color, size, comb, and egg capacity."

The Iliff community, as well as the Logan County Poultry Association, intends to continue the standardization of flocks, working towards accredited flocks throughout the county.

The Control of Rose Slugs.

Each year many women are anxious to have their rose bushes free of rose slugs. They will welcome the new Farmers' Bulletin 1252, "Sawflies Injurious to Rose Foliage," by Wm. Middleton. In this bulletin we are told that one of the simplest methods of control is just a strong stream of water applied often and at different angles of the bush.

In places where a strong stream of water is either unavailable or inconvenient to use, a stomach poison like lead arsenate and water sprayed upon the leaves gives good results. If the spraying is to be limited to a few bushes only, three rounded teaspoonfuls of powdered lead arsenate to a gallon of water is a good mixture, and one of the small hand spray pumps will serve the purpose.

Another spray which will be effective against young larvae and which has the additional advantage of being a good aphid remedy, is 40 per cent nicotine sulphate, which should be diluted as recommended upon the container, usually 1 part to 800 parts of water, to which some fish-oil, or laundry soap, has been added. For small quantities use approximately 1 teaspoonful of nicotine sulphate to 1 gallon of water in which 1 ounce of soap has been dissolved.

The bulletin discusses the life and habits of the three more important rose sawflies, the bristly rose slug, the European rose slug, and the coiled rose-worm. Copies may be had free upon application to the United States Department of Agriculture, Washington, D. C.

Boys' and Girls' Clubs.

Are you boosting for the club members in your community? Do you appreciate all that the club leader is doing for your children? Do you encourage the children in their sewing, baking, corn raising, pig raising?

Our Fashion Service.

All patterns 12 cents each. Address Western Farm Life, Pattern Department, 1518 Court Place, Denver, Colo.

Read This Before Ordering: Patterns ordered through this magazine are mailed promptly from the factory at Brooklyn, N. Y., and arrive in 10 to 12 days from time order reaches Western Farm Life. Be sure to specify size and number of patterns. Write your name and postoffice address plainly to avoid delay. These patterns are handled at cost, as a service to our women readers. The price of 12 cents includes postage.

3978, 3993, 3986—A Very Popular "Combination." Cape suits are much in vogue this season in cloth, linen, silk and also in pongee and gingham. In this illustration we have a smart Blouse style pattern 3978, a new and practical Skirt, pattern 3986, and a very pleasing youthful Cape, pattern 3993.—"Kiltie" plaid suiting was used for cape and skirt, and Canton crepe for the blouse.

The Blouse is cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It

requires 2⅜ yards of 36-inch material. The Cape is cut in four sizes: 14 and 16 years for misses(and medium (38-40 bust), large (42-44 bust) for ladies. The Skirt is cut in six sizes: 25, 27, 29, 31, 33 and 35 inches waist measure. Cape and Skirt will require 6 yards of 40-inch material for a medium size. The width of the skirt at the foot with plaits extended is about 2 yards.

THREE separate patterns mailed to any address on receipt of 12c FOR EACH pattern, in silver or stamps.

3653—A Serviceable Popular Style. Pattern 3653 was used for this model. It is cut in four sizes: 2, 4, 6 and 8 years. A 4-year size requires 2¾ yards of 27-inch material. Gingham with linen or organdy, chambrey and percale combined, pongee, repp, poplin and crash are good for this model. The sleeve may be finished in wrist or elbow length.

3989—A Pretty Summer Frock. Here is a model especially attractive for slender, youthful figures. The new Swiss organdies, voiles and tissues are smart and suitable for this design. It is nice too for embroidered crepe and pongee. The pattern is cut in three sizes: 16, 18 and 20 years. A 16-year size requires 5 yards of 36-inch material. The width of the skirt at the foot is about 2 yards.

3963—A Popular Play Garment. It is cut in four sizes: 2, 4, 6 and 8 years. A 4-year size requires 2¼ yards of 27-inch material. Seersucker, gingham, drill, poplin, kindergarten cloth, gabardine and serge may be used for this style.

CATALOGUE NOTICE.

Send 12c in silver or stamps for our UP-TO-DATE SPRING AND SUMMER 1922 CATALOGUE, showing color plates, and containing 500 designs of Ladies', Misses' and Children's Patterns, a concise and comprehensive article on dressmaking, also some points for the needle (Illustrating 30 of the various, simple stitches), all valuable hints to the home dressmaker.

Colorado Dairymen Will Visit Wisconsin.

Dairying as an industry in Colorado is in its infancy. The state, however, possesses exceptional advantages for development along dairy lines. Already much progress has been made in the introduction of better cows and better methods. A group of Colorado dairymen are now planning a trip to Wisconsin to investigate at first hand the dairy practices which have made that state famous. This tour is being planned by Earl Reed, agricultural agent of the Colorado & Southern and Burlington railroad. Leaving Denver June 5, the first stop will be at Kansas City, where the National Holstein association meeting and sale is being held.

Wednesday, June 6, is educational day at the big Holstein convention and an unusually strong program has been prepared. Among those who will speak are Dr. E. V. McCollum, J. C. McDowell of the United State Department of Agriculture; Dean F. B. Mumford of Missouri University; Dean F. D. Farrell of the Kansas Agricultural college; H. J. Waters of the Weekly Kansas City Star; D. D. Aitken of Flint, Mich., and W. S. Moscrip of Lake Elmo, Minn. An extensive dairy exhibit will be placed by the United States Department of Agriculture and the agricultural colleges of Kansas and Missouri will have educational exhibits. This Heart of America Dairy Show is an outstanding event in the dairy world for the Middle West and should draw a large attendance from the dairy sections of the western states. Colorado's quota in the sale is eight animals.

Dairymen who desire to join the tour to Wisconsin dairy sections should communicate with Mr. Reed at the railway exchange building, Denver. Leaving Kansas City the party will go to Chicago and on to the famous Waukesha section, visiting the Wisconsin Agricultural college at Madison on the way. Entertainment will be provided by the various breed associations of Waukesha county. A visit will be made to the famous herds of G. B. Irwin, John Hackney and others of Minnesota, and also a stop at the Minnesota Agricultural college. If a large enough party goes a Pullman sleeper will be chartered and continue through the whole trip.

An Organized Breeding Center in the Making.

(Continued from Page 5).

then for the Ken Caryl Ranch, a 15,000 acre property belonging to John C. Shaffer, owner of the Rocky Mountain News, Denver Times, Chicago Evening Post, Louisville Herald and several other metropolitan dailies. Littleton has perhaps given little thought to the advantage of numbering among its summer citizens—that is, in its trade territory—a man who is rated as one of the biggest publishers of America and whose boast is clean journalism. Mr. Shaffer isn't maintaining his Colorado ranch as a plaything; it isn't a gentleman's farm, but a breeding estate, with Hereford cattle and Percheron horses as the chief lines of activity. He spends four months out of the year at Ken Caryl.

That his operations are not on a small scale is evident when it is known that his breeding herd of Herefords numbers more than 200 head of registered animals. This herd hasn't been making much of a fuss in the shows, as yet—mark that—as yet! The herd-heading sires such as Ken Carlos and Marcus Fairfax are giving a good account of themselves and there will be some Ken Caryl offerings in the calf classes this fall that will be eye-openers. The herdsman here is Bill Lawrence, who is as partial to Herefords as his brother Jack is to the Maxwell-Miller Shorthorns.

Mr. Shaffer's choice of a manager indicates that he means business along breeding lines. The man in charge is Frank Smith, a Colorado Aggie, who knows the game from the ground up. The barn for the breeding herd is built of hollow tile and is of magnificent proportions and so commodiously arranged that it might serve as a show barn. Do not get the idea, however, that the Herefords are stall-fed; they have all outdoors—thousands of acres of foothill and mountain pasture—over which to roam, so that they may keep the quality acquired through breeding to a strain that is noted for hardiness.

Baby Calves Demonstrate Vigor.

The two-mile drive after entering the gate of Ken Caryl was over a roadway cleared through an April snow. Gathered along this roadway were the Hereford mothers and their young, for it was calving season. The little fellows from a day or two to possibly three weeks of age, scampered about in front of the motor car that bore the party. They showed the vigor of the strain by their activity and the proficacy of their sires and dams, by their numbers. It was a delightful day's tour, unfolding a vision of what Littleton may do as a breeding center when these outstanding developers of their respective breeds get together in one organization for mutual help. Such is the plan of the county agent—the formation of an association in which all may join; the beef, dairy, hog and poultry breeders, to establish touch with each other; to have a central office at Littleton through which buyers in any line of purebred livestock may be directed to the ranches where their wants can be adequately filled, and furthermore, to co-operate in holding an annual exhibition at Littleton of the finest purebreds to be found anywhere in the west.

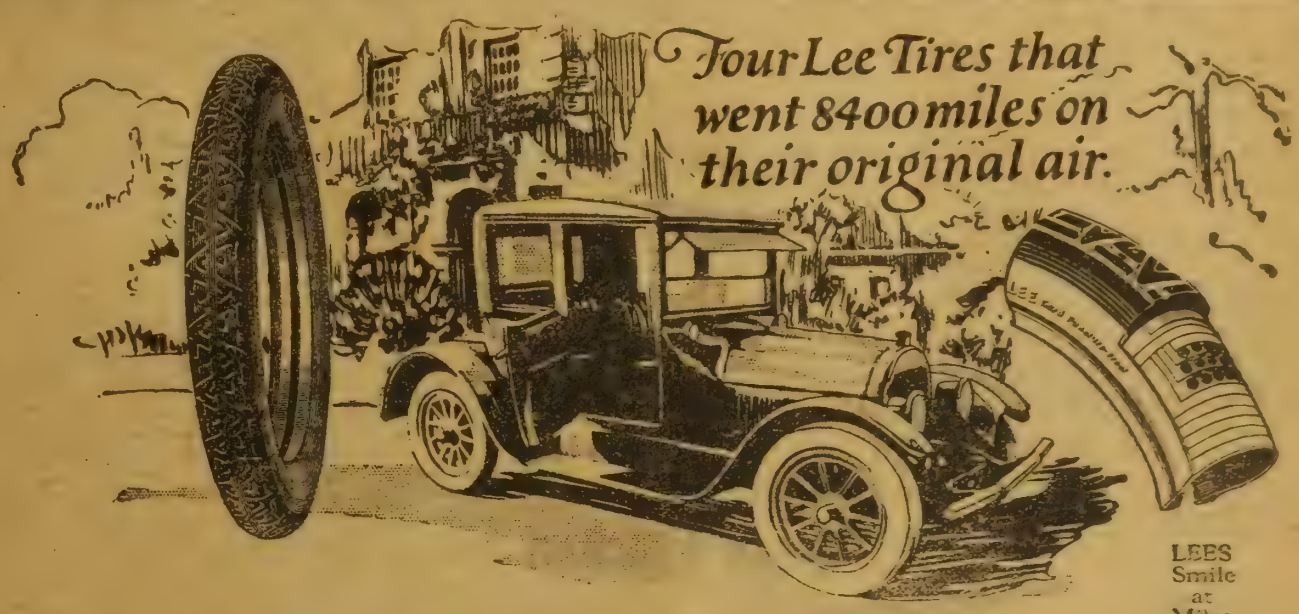
Many Other Breeding Farms.

Now just a word about the many other breeding farms. It would take a week to see them all and do them justice. Each name is a familiar one in its own breed and class. Dr. T. F. De Witt, G. W. Baker, O. A. Green and the Philips-Highland Ranch, all in the Hereford game, the latter also handling saddle horses. Then there is J. B. Benedict, a breeder of Milking Shorthorns, and Wallin G. Foster, of Holstein fame. In hogs we have W. H. Marshall, owner of the Edgemoor Duroc herd, formerly the property of Cadwell Marton; Hillcrest Hog Farm, owned by H. B. Payne, the Polands China breeder; Robert Russell of Maplefield Farm, breeder of Thoroughbred horses.

In poultry, Romoco Farms, Mr. and Mrs. Stuart Sweet's great center of Rhode Island Reds; and Blakeland Farm, where Mary Blake Kinkel is winning fame with White Leghorns. If that isn't a nucleus for an organized community breeding center, where in the United States could one be found?

Keeping Engine Cool.

If your engine overheats, examine the fan belt to see if it is slipping. If this is working properly, feel the radiator after the engine is warmed up and see if it is warm at the bottom and hot at the top. This would indicate poor circulation and a pump out of order. If the pump is found to be working properly and the radiator not clogged up with some patent no-leak compound, there is another cause which may be making the engine overheat, and that is too much gasoline. The driver who learns to hold his gasoline feed down to the lowest point possible, driving "on the spark," as some call it—that is, with a well advanced spark—except when climbing a steep grade, usually has a cool motor. Too much gasoline will cut down the speed and overheat the engine.



LEE Puncture Proof Tires

Jno. L. Dabbs, E. I. DuPont de Nemours Co., Charlotte, N. C., reports: his Cadillac Coupe with Lee Cord Puncture-Proofs ran 8,800 miles the first 18 months on the original air in the front tires. After 8,400 miles the rear tires were retreaded, but up to that time had never been flat.

SHOD with Lee Puncture-proofs, you can forget your tires, except to see that correct air pressure is maintained.

A three-ply flexible armor of steel discs permanently vulcanized into the carcass of the tire gives extra strength without loss of resiliency.

This non-puncture feature makes Lee Tires especially desirable for automotive equipment on the farm. It eliminates a long list of tire troubles—punctures, blowouts, tire changing, inner tube and casing repairs, loss of time. It insures greater non-stop mileage in passenger car and truck service.

The Lee Dealer will prove to you that Lee Tires are actually puncture-proof. He will confirm our cash-refund guarantee against puncture.

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June Anconas

June is the time to get a start with small capital, in this, the most profitable breed of chickens. Our National Western winners were hatched in June and July last year. Anconas mature more rapidly than any other fowl on earth. We offer the biggest reductions ever made in QUALITY chicks, eggs and breeding stock.

BABY CHICKS are cut from $22 to $15. per 100. Special chicks from fancy selected pens at $25 per 100. Utility eggs are cut from $10 to $6 per 100. EGGS FROM FINEST EXHIBITION MATINGS the West affords at HALF PRICE, $2, $3 and $5 per 15. Guaranteed. Ours is one of the largest Ancona plants in the United States. No orders are too large or too small for us. Remember that our stock is already acclimated to this high altitude, and will give better results than stock from other sections of the country. Only 10,000 of these chicks will be hatched, and they are sure to be sold up early at our low prices. Better book your order today and avoid disappointment. A deposit of 25% now will hold your order till wanted. All orders filled in rotation. We also offer breeding stock at cut prices.

Great Western Poultry Farm

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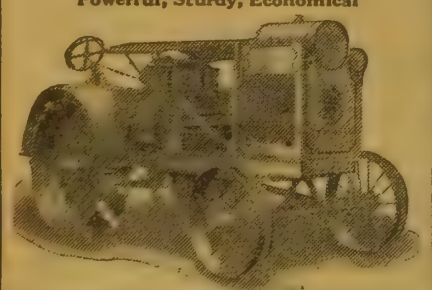

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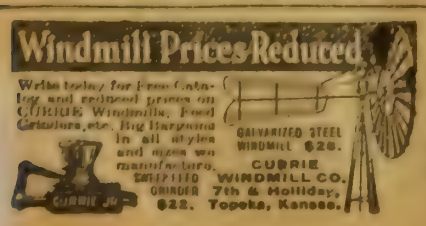

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Tablets Dropped Into Drinking Founts Banish Vermin, Make Fowls Grow Faster and Increase Egg Yield.

Any poultry raiser can easily rid his flock of lice and mites, make chickens grow faster and increase their egg yield by simply adding minerals to the fowls' drinking water. This does away with all bother, such as dusting, greasing, dipping and spraying. The necessary minerals can now be obtained in convenient tablets, known as Paratabs. Soon after the fowls drink the

mineralized water, all lice and mites leave them. The tablets also act as a tonic conditioner. The health of the fowls quickly improves, they grow faster and the egg yield frequently is doubled. Little chicks that drink freely of the water never will be bothered by mites or lice.

The method is especially recommended for raisers of purebred stock, as there is no risk of soiling the plumage. The tablets are warranted to impart no flavor or odor to the eggs and meat. This remarkable conditioner, egg tonic and lice remedy costs only a trifle and is sold under an absolute guarantee. The tablets are scientifically prepared, perfectly safe, and dissolve readily in water.

Any reader of this paper may try them without risk. The laboratories producing Paratabs are so confident of good results that to introduce them to every poultry raiser they offer two big $1 packages for only $1. Send no money, just your name and address—a card will do—to the Paratab Laboratories, Dept. 895, 1100 Coca Cola Building, Kansas City, Mo., and the two $1 packages, enough for 100 gallons of water, will be mailed. Pay the postman $1 and postage on delivery, and if you are not delighted with results in 10 days—if your chickens are not healthier, laying more eggs and entirely free from lice and mites—your money will be promptly refunded. Don't hesitate to accept this trial offer as you are fully protected by this guarantee. —Adv.

Alfalfa hay is one of the best spring feeds for brood sows.

Profitable Farm Poultry

W. E. VAPLON.

Questions about the farm flock promptly answered by letter. Free advice on all phases of poultry production. Address all inquiries to Poultry Department, Western Farm Life, Denver, Colorado.

There is little excuse for keeping more than one breed of chickens on the farm. Keep the breed you like best and the one that seems to fit into your conditions best. If you take pride in the flock you will give them better care. No one can get enthusiastic over a flock of mongrels and the care given will be in proportion to the interest taken in them. Contests have shown that almost any breed can make good production records. Sometimes one breed wins in a contest and sometimes another. Almost invariably the best results come on farms where a purebred flock is kept.

Bulletin on Culling.

One-third of the hens in Colorado are poor producers. Since the loss from each cull hen is about one dollar a year, it behooves every farmer and every person who has a backyard flock to learn how to tell the layers and non-layers.

As a service to all Colorado poultry producers the Agricultural College has published a complete, well illustrated bulletin, entitled "How to Tell the Layers and the Non-Layers." The bulletin explains modern culling methods in a simple, complete manner, enabling even the amateur poultry producers to learn how to cull their flocks. It is now ready for distribution. Address the extension department of Colorado Agricultural College, Fort Collins, for your copy.

Poultry Club Gives Chicken Dinner.

A very unique affair and something quite different from any of the previous activities of the poultry clubs in the state was staged at Norwood, San Miguel county, by the girls' and boys' poultry club of that place one Saturday noon recently.

The club members, with the assistance of Mrs. Alfred Buban, their club leader, and several other women of the community, served a chicken dinner to ninety-four citizens of Norwood. The meal was most excellently prepared and it was served in a very capable manner by the members of the club. The proceeds of the festivity went to create a fund to assist in carrying on club work in the community.

The chicken supply came from nonlayers which were donated by Mrs. J. F. Morgason, and is one of the results of the poultry culling work started some time ago by F. T. Baldwin, county agent, and P. C. Jamieson, poultry specialist from the Colorado Agricultural college.

This effort by the club members, though a new form of activity, was a complete success. It bids fair to be of such value that other clubs of the county as well as those in other sections of the state are likely to pattern after the idea. The boys' pig club of Norwood already has gotten the bug and has begun laying plans for a pig roast a little later in the season.

Milk Good Feed for Poultry.

When properly fed, milk makes an excellent feed for poultry. Skimmed milk, buttermilk, and cottage cheese are economical feeds. These are all productive of good money-making results and, where they are available, it is wise practice to feed them. They may be fed either alone or used to moisten the mashes.

The mash, however, should not be moistened one day and then fed dry the next. Follow one or the other of the two plans constantly. Fowls will convert what many times would otherwise waste, into meat and eggs if fed the milk and its by-products that are often obtainable on the farm.

Keep Chicks From Piling.

One of the real dangers confronting the poultry raiser who uses a stove brooder and a modern colony brooder house is that when the weather begin to get warm so that fire is no longer needed in the stove, the chicks will pile up at night and trample a considerable number of otherwise vigorous chicks. Disastrous piling in the brooder house is likely to occur even after the chicks are well feathered unless steps are taken to prevent it by protecting the corners and sides of the house so that no sharp angles are left.

Probably the best means of preventing piling, according to T. S. Townsley of the Missouri College of Agriculture, is to make a framework entirely around the walls of the house by starting about 18 inches from the wall and sloping the framework up to the wall at a point 12 or 15 inches from the floor. If this framework is covered with poultry netting and then narrow strips are nailed over the netting at intervals of 3 to 6 inches, when the chicks have a tendency to begin piling they will push each other up over this slanting surface and come to rest on the narrow strips in a normal roosting position.

As soon as the chicks become sufficiently well feathered that they do not specially need the heat from the hover, low roosts should be provided in the brooding house and the chicks be given an opportunity to learn to roost without piling up.

Turkeys Yield Good Profit.

A return of $1,525 from turkeys in two seasons was obtained by an Oklahoma woman in spite of heavy losses in her flock due to conditions that might not occur elsewhere. The extension agent convinced her that it would pay to substitute purebreds for her scrub stock. He also gave her information on the management of her flock.

She started with ten hens and one tom of the Mammoth Bronze variety. From these she raised 122 young turkeys, but lost fifty of them in a sudden hail storm. The rest she sold as breeders, advertising them in a farm journal. They netted her $900, or an average of $12.50 each.

The next year she started with the same number of breeders and obtained 145 young poults. Unfortunately one of the farm hogs was fond of turkey, and destroyed all but fifty-one of the flock before the depredations were traced to him. At about $12 apiece, however, the remaining fifty-one brought $625.

Other instances of successful turkey raising reported in that same county show a total profit of $2,418.90 on the sale of 210 turkeys and twelve dozen eggs out of 226 turkeys in different flocks.

Quality Counts in Eggs.

Bad eggs cost Colorado farmers nearlyy a million dollars a year, says P. C. Jamieson, poultry specialist of the Agricultural college. About 90 per cent of the eggs received on Market street in Denver are just eggs. No mention is made of quality. A few farmers, here and there, take special pains with their eggs. They grade them and guarantee them fresh. They get from 5 to 8 cents a dozen more.

Colorado farms produce about 15,000,000 dozen eggs a year. Five cents more on each dozen would surely make a fine total. Many farmers are unable to ship fresh eggs in quantities because their flocks are small. The difficulty can be overcome by neighbors pooling and shipping their eggs together.

The Colorado Agricultural college through its extension service, is doing everything possible to improve the quality of Colorado eggs. A state-wide campaign is planned to build a reputation for "The Colorado Egg."

Co-Operative Egg Circles.

In some parts of the country co-operative organizations called "egg circles" have brought about great changes in the methods of marketing of eggs, and farmers are receiving much better prices than formerly. The egg buyer, who was formerly a gatherer of eggs, is now employed by the association, and is paid a certain price per dozen for gathering the eggs. Each farmer stamps his eggs with his own number, and only the best quality are sent to the market. Because of the larger number of eggs to be shipped, and because of their guarantee of freshness, a better price can be commanded in the market. This method offers the man who does not make poultry a big issue a good and reliable market, and helps to solve the problem of farm efficiency. Various farm organizations might well take this matter up and see if the idea cannot be put into workable shape for their several communities.

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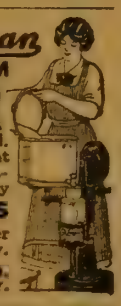

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Dairying and Hog Raising

All letters regarding commercial and technical features of dairy farming and hog production promptly answered. Address all communications to Dairy Department, Western Farm Life, Denver, Colorado.

A three-year-old registered Holstein owned by J. J. Kalberer of Broomfield was high cow in the Boulder County Cow Testing association for April. Her record was 2,685 pounds of milk and 89.9 pounds of butterfat. Marcus Harper of Boulder had the high herd of the month for herds of fifteen cows and more. His eighteen cows averaged 1,235 pounds of milk and 44.3 pounds of butterfat. C. W. Hake of Lafayette is on the honor list for the month with ten cows averaging 1,025 pounds of milk and 40.1 pounds of butterfat. Mr. Hake has just built and equipped a modern milkhouse with steam boiler and has installed a milking machine. The high herd of those of less than fifteen cows was that of C. C. Clingman, twelve cows averaging 833 pounds of milk and 43.3 pounds of butterfat. There were sixty-eight cows in the association producing forty or more pounds of butterfat for the month.

High Prices for Record Cows.

Cow testing association records in the Green Mountain Dairy of Lamar, Colo., added quite materially to the price obtained for some cows recently sold at auction. Forty animals were sold, a part of the cows having been on test in the Arkansas Valley association for a number of years. Seven cows with association records of a year averaged $150. Thirty-three cows without records sold for an average of $100 each. The two cows with the highest association records sold for $200 and $168, respectively. A number of heifers raised in the herd brought $70 a piece. Records in this herd not only increased the selling value of the cows themselves, but enhanced the value of other cows and heifers in the herd. Records in this herd paid for their cost many times over in this one sale, in addition to having made production more efficient and profitable.

In his report for April, Max Grandy, cow tester, points out that the average cost for roughage for the month was quite materially reduced from the cost of last month, due to the increased use of the pastures. The profit over feed cost, however, was reduced due to a 15 per cent drop in the price paid for milk.

Since the Lamar stock show considerable interest has been aroused in getting a number of purebred Holstein heifers. A number of the more progressive dairymen have announced their intentions of getting into purebreds.

Records on the 275 cows tested show that for April the average profit on a hundred pounds of milk over feed cost was 75 cents. The Harry Heath herd of twenty-six cows was high herd for the month with an average profit over feed cost of $12.50 a cow. The high cow also was in this herd, her profit over cost of feed amounting to $25.10. Model Dairy of Holly had second herd; Wright Brothers of Lamar, third; Turpin & De Witt, Lamar, fourth, and Guy Gilbert, Lamar, fifth.

Feed Pigs Through Sow.

Does it pay to feed your brood sows, suckling pigs, all they will eat? The sow, herself, usually falls off in weight during this period, no matter how well fed. "Never in his life does the pig make cheaper gains than while he is getting all the milk his mother can be made to produce," said a most successful breeder of purebred hogs in reply to this inquiry.

Experienced hog men seem to agree that at no time in their lives do pigs make gains more cheaply than while suckling the sow. Sows are evidently efficient milk producers. Professor Woll of the Wisconsin experiment station tells of a 438-pound sow that produced 7 pounds of milk in a day, consuming in feed 4 pounds of cornmeal, 4 pounds of shorts and 8 pounds of skim milk. Another experimenter investigated the milk production of twelve sows of different breeds. One might wonder how a sow's milk record is obtained. In this case the pigs of the litter were very carefully weighed before and after suckling and the increase in weight credited as milk. The pigs were kept away from the sow and allowed to be with her for a short time every two hours during the day and every four hours at night. These sows gave from 4.9 to 6.3 pounds of milk daily and a total for eighty-four days ranging from 429 pounds to 532 pounds. One 500-pound sow with ten pigs gave 669 pounds of milk. Sows' milk is richer in all its constituents than cows' milk. It is evident from these figures that well bred brood sows rank right up with good dairy cows in their ability to convert feed into milk. This is the reason we find the most successful hog men feeding their brood sows for maximum milk production.

It is possible for a pig to weigh 70 pounds when 70 days old and occasionally even more. Most of the increase is to be credited to the mother's milk. It is the practice for hog producers to figure that it requires 10 or 11 bushels of corn, or its equivalent, to produce 100 pounds of marketable pork. The pig with its mother will produce gain for half this amount of feed. Actual tests have been made, comparing a sow and litter for the seven weeks of the suckling period with the seven weeks following, the results showing that the gains on the suckling litter cost at the rate of 316 pounds of grain, or equivalent to the 100 popnds, while the gain made by the weaned pigs for the seven weeks after the weaning cost 384 pounds of feed to the 100 pounds.

The whole point of the story is that it pays to take advantage of a good brood sow's capacity for milk production and feed the pigs through the sow by nature's method. By so doing the feed will produce greater returns during the first eight or ten weeks of the pig's life, than by overtaxing its digestive powers before it has developed the capacity for handling solid feeds.

Pig Club Trip.

Fifty-five men and pig club boys of Prowers county went on a visiting tour recently to study the hog methods of the community. Seven boys of the Hartman club are on their second year's work and they were joined by the boys of the Sunny Slope club and members of the Hartman Purebred Breeders' association. D. A. Jay, animal husbandry specialist, who accompanied the boys, pointed out the various lessons at the farms visited and at the Willow Creek school house a regular feeding school was conducted with the Liberty pig club.

Colorado Jersey Wins Medal.

Another cow in the herd of A. M. McClenahan of Greeley, Colo., has completed an official record. She is Helen de Kay 320831, which cow was started on official test at six years and five months of age, and produced 701.3 pounds of butterfat and 13,428 pounds of milk, and by carrying a living calf 223 days during the test she wins a gold medal.

Elbert Shorthorns Average $99.

An average of $99 was made at the Elbert County Shorthorn Breeders' association sale held May 3, after being rained out the week before. This was the regular semi-annual sale of this association and was attended by a large number of buyers from every section of the state. The top was a heifer from the C. A. Melburn herd, going to the Corral Bluffs ranch at Colorado Springs. This firm purchased eleven head. There was a strong demand for the young bulls and a large number of sales were to new breeders. The top on bulls was $135 for a bull from the Ralph G. Jones herd, going to Patsey Mourning, Kiowa.

Foster Holsteins Average $302.

An average of $302 was made in the dispersal sale of registered Holsteins held by Wallin G. Foster, proprietor of the Wallie Farm, May 15. Sixty-one animals were sold. The top of the sale was the cow Colantha Bergsma, going to R. M. Cameron of Barr Lake, Colo., for $2,600. Gem Johanna Segis Pontiac sold to Spencer Penrose of Denver for $1,800, and Sam Hansen of Denver bought Mystic Polkadot Lotta for $1,675. The top bull was King Beryl Veeman Inka, sold to J. H. Denslow, Arvada, for $900. C. A. Donley paid $525 for Colorado Colantha for the Colorado State Home.

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Market Outlook for Farm and Ranch Products.

(Continued from Page 5.)

it will not be completed for thirty days. Total shipments in that direction still promise to fall below those of last year. Unfavorable weather and the failure of the railroads to grant reduced rates were partly responsible.

Summer Hog Market on Profitable Basis.

Receipts of hogs at the eleven leading markets are running ahead of the ten-year average. The fresh pork market has weakened slightly and export sales of hog products are not voluminous. Nevertheless, hog prices are holding up exceptionally well. It is quite probable that values will pass through a trough before the middle of June, but a break below the $10 level at Chicago should be of brief duration if it occurs at all. After the June run has been garnered, receipts will drop to the lowest level of the year, so that prices should remain on a highly remunerative basis as compared with corn, at least until the new crop of hogs begins to come upon the market next fall in large numbers. If hog production has not been increased more than prevalent reports upon loss of spring pigs would indicate, the price level should be a satisfactory one most of the coming year.

A heavy run of fat sows is expected a little later on as well as a generous supply of heavy fat barrows, so that the lard kettle may be kept well filled all summer. Even so, lard is not likely to become much cheaper than it is now and the usual fall export trade in lard should take care of whatever accumulation occurs.

Live Muttons Selling Lower.

The live mutton market is about half way through the seasonal decline in prices which marks the onset of the new crop of lambs and the effect of hot weather on mutton consumption. Receipts at the seven leading markets for three weeks have been practically equal to the eight-year average for this season of the year, but the total supply has been augmented by the arrival of two cargoes of approximately 34,000 carcasses of New Zealand frozen lamb and mutton at an eastern port. The top of the market promises to hold above $13 at Chicago most of the summer, as the supply in all sections is below normal.

Rise in Wool Values Continues.

Wool prices continued upward last week, Boston quoting an advance of about 5 cents per clean pound. Seaboard markets were feverishly active, although the supply of wool at these points is small. The range country is excited with wool changing hands as fast as the growers are willing to sell.

May Wheat Unsettles Market.

Owing to the alignment of large grain interest on each side of the market for May wheat at Chicago, conditions in that delivery are exercising an exaggerated influence upon the trend of prices. The outcome remains in doubt. Over 5,000,000 bushels have been delivered thus far and the rule permitting deliveries on track has been invoked because of a shortage of storage room, but the wheat has gone into the hands of exporters and other strong interests who appear to want it and it is claimed that a good deal of it is already sold abroad.

Wheat Disappearance Runs Large.

Comparing the foreign visible supply of wheat and stocks afloat on July 1 last year with the stocks in those positions in the middle of May this year and counting world's exports between those two dates, about 573,000,000 bushels of wheat have disappeared in international trade in the last ten and one-half months, according to Russell, the New York statistician. In the same period in the preceding year, disappearance was 529,000,000 bushels. If the rate thus far is maintained importing countries will need 80,000,000 to 85,000,000 bushels more before July 1, and 140,000,000 bushels more before August 1, unless stocks afloat which are now about 50,000,000 bushels, are allowed to become very small.

Australia and Argentina combined are believed to have about 80,000,000 bushels yet for export, which means that North America must furnish a small quota right along and that old crop surpluses will be well cleaned up in all exporting countries before the beginning of the European new crop year on August 1.

Crop Reports Fairly Good.

The condition of the winter wheat crop as given by the government was slightly higher than the unofficial returns. Average condition on May 1 was

83.5 per cent, which compared with a ten-year average of 87.1 per cent. It is believed that since May 1 further improvement has taken place, although some reports have been slightly less favorable in the last few days.

The acreage abandonment was estimated at 14.4 per cent, or 6,446,000 acres, compared with an average of 10.4 per cent. In the area affected by drouth last fall abandonment was high, Texas losing 41 per cent, Kansas 27 per cent, and Oklahoma 24 per cent. The forecasted yield, assuming average conditions until harvest, is 584,793,000 bushels, or about the same as was harvested last year.

The lateness of the spring is shown by the fact that on May 1 only 63.5 per cent of the spring plowing had been completed, compared with a ten-year average of 70 per cent, and only 53.6 per cent of spring planting was finished compared with an average of 57.8 per cent.

New Wheat Should Sell Well.

The new wheat crop should be welcomed at prices only 10 to 20 cents below the present cash prices. When receipts begin to mount, following harvest, the sales for export for July, August and September shipment already estimated at 35,000,000 bushels, will need to be filled. If these export sales continue to be made until new wheat begins to move they should be of sufficient volume to prevent any sharp sag in the market.

The corn market has been dragging as the movement to primaries has been above the average for this season of the year, and the increase which generally appears around the first of June is showing up in the form of larger country offerings. The loss in values has not been marked, however.

Oats Disappearance Quickens.

Both domestic and export demand for oats is better than a few weeks ago, and this grain is disappearing into distributive channels with mere celerity. All reports point to a decreased acreage with a high percentage of late-planted grain which generally yields none too well.

Cash Grain Markets.

The range of cash grain prices follows:

Kansas City—Wheat, No. 2 hard, $1.31@1.68; No. 3, $1.29@1.63.

Corn, 57@58c; No. 2 yellow, 59@60c; No. 2 white, 57@58c.

Oats—No. 3 white, 37¾@40c; No. 4, 33½@39½c.

Rye—99c@$1.

Barley—55@55½c.

Hay Reserves Below Average.

Farm holdings of hay on May 1 were estimated by the Department of Agriculture at 10,792,000 tons. This is much less than last year, when stocks were 18,771,000 tons. The five-year average is 12,417,000 tons.

Kansas City—Prairie upland No. 1, $12@13.50; No. 2, $10@11.50; alfalfa, choice, $24@25.50; No. 1, $22@23.50; standard, $18.50@21.50; No. 2, $14.50@18; No. 1 timothy, $18.50@19.50; No. 2, $14.50@16.50; No. 1 light clover-mixed, $18@19; No. 1 clover-mixed, $15.50@17.50. Straw, $9@10.

Steady Absorption of Eggs for Storage.

The movement of eggs into cold storage continue unabalated, with 50 to 60 per cent of the receipts at the four leading cities going for that purpose. The available supply is large, with receipts running ahead of the corresponding season last year, but it is probable that the peak of the movement has been passed. Cold storage holdings promise to reach the highest figure in trade annals before the accumulation season is over.

Receipts of dressed poultry at the four leading cities since the first of the year total 68,639,621 pounds, compared in the same period in 1921. Latest quotations:

Kansas City—Eggs: Firsts, 22c; seconds, 19c. Live Poultry—Broilers, 40c; hens, 22c; old roosters, 12c; ducks, 20c; geese, 10c.

Denver—Eggs 27c. Hens, 21c; broilers, 50c; roosters, 8c; geese, 20@22c; ducks, 20@22c; turkeys, 24@33c.

Butter Storage Begins.

Storage holdings of butter began to increase starting with the third week in May. Stocks were down to about 550,000 pounds at the four leading cities, which is only about 10 per cent of the amount still on hand when stocks were at the minimum last spring. Receipts since the first of January have been consistently larger than those of last year, so that the evidence that consumptive demand has been unusuallly broad is convincing. Reports upon creamery butter production show a rather steady increase. The market has sagged slightly in the last few days, but further declines are not expected to be severe.

Prices on 92-score fresh butter on May 18 were: Chicago, 35c; New York, 36½c; Boston, 37c. Philaoelphia, 37c.

Potato Shipments Remain Heavy.

After making marked gains, the potato market has slumped once more under the burden of an unusually heavy supply. Shipments of old and new stock combined in the last ten days were nearly twice as large as a year ago. Northern whites are quoted at $1.30 to $1.50 per 100 pounds sacked, and Russets at $1.75 in the Chicago carlot market. Maine is the chief source of old stock. The new crop in Florida has nearly all been shipped, but South Carolina and Louisiana are becoming active. New potatoes comprise nearly one-third of the supply at present.

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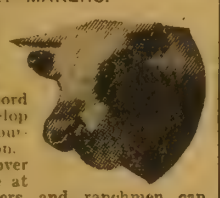

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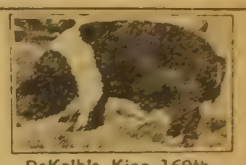

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How I Am Making Money on My Plains Farm—Page 5

WESTERN Farm Life

JUN 27 1922

Vol. XXIV. *Denver, Colo., June 15, 1922.* *Semi-Monthly*

HOGS ARE NOT ONLY MORTGAGE LIFTERS, BUT BUILDERS OF FARM IMPROVEMENTS.

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Cut, thresh and clean and put your grain into the wagon box—**all in one operation**—with an Avery Header-Thresher.

Here is the machine that means time, labor and expense saved for you during the rush season. It means **more** acres cut per day and a saving of from 2 to 5 bushels **more per acre.**

Low in first cost—no cutting machinery to buy as it works with any standard make of header, new or old, taking the same position under the elevator as the barge or stacker-wagon. Makes you as independent in harvesting your grain as in planting it.

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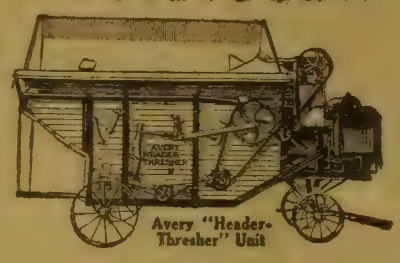
The Avery Header-Thresher is selling fast. Every grain grower wants one. Factory production is limited, so see your Avery dealer today. Write us for special "Header-Thresher" booklet containing full description and many illustrations. Also ask for Avery catalog showing Avery Tractors, Speed Trucks, "Yellow-Fellow" and "Yellow-Kid" Threshers and other motor farming and road building machinery.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Tractors, Trucks, Motor Cultivators, Threshers, Plows, etc.

Believes in Summer Tillage.

Summer tillage as a method of raising wheat successfully in Cheyenne county, the northwest county of Kansas, is rapidly increasing, says Albert Weaver, a wheat farmer of that section. He is convinced by his own experience, study and observation, that summer tillage is one of the most valuable practices for the farmer of the plains regions. He says:

"The great semi-arid region east of the Rocky Mountains, with an average rainfall of 12 to 18 inches, awaits the genius of its farmers to adopt and apply rightly the principles of summer tillage to transform it into the greatest hard wheat producing belt of the United States. There are millions of acres in this great area, nearly every acre of which, under the proper summer tillage method, is capable of producing 1,000 bushels of wheat without depleting the soil to any great extent—a yield, the years that it is cropped, of 30 to 50 bushels per acre. Last year I had fields of summer tilled wheat that produced 33 bushels per acre of high quality wheat testing 12 per cent gluten, and it was an off-year, too.

"This rich soil, the subsoil of which has had no moisture for ages, responds rapidly in releasing its plant food elements when supplied with stored rainfall by summer tillage. This same stored rainfall tides the growing crop over the dry spells. It is the high yield per acre that reduces the cost per bushel to the minimum. In 1913, which was also an off-year for wheat in this section, I had a field of summer tilled wheat that yielded 26 bushels per acre and it cost me 35 cents a bushel in the way of production costs, not figuring anything for the use of the land."

New Colorado Potato Grade.

After careful investigation and a number of public hearings in all parts of the state the Colorado Division of Marketing, with the approval of the State Board of Agriculture, has officially promulgated an added grade for potatoes to be known as Colorado Grade Standard, which is described as follows:

Two-thirds of the potatoes in this grade shall meet all requirements of U. S. Grade No. 1. The remaining one-third shall meet the size requirements of U. S. Grade No. 1, and shall meet the quality requirements of U. S. Grade No. 2, except that no dry rot shall be permitted, aside from the tolerance.

In order to allow for variations incident to commercial grading and handling, 5 per cent, by weight, of the entire lot may be under the prescribed size, and, in addition, 6 per cent, by weight of the entire lot, may be below the quality requirements of U. S. Grade No. 2, but not more than one-third of such 6 per cent, that is to say, not more than 2 per cent by weight of the entire lot, may have the flesh injured by soft rot.

Since there is not any tolerance provided in the two-thirds which shall meet all requirements of U. S. Grade No. 1, the entire tolerance shall be included in the remaining one-third of the lot.

New Kind of Club.

A forestry boys' club was recently formed at Cretonne, Colo., with the assistance of Forest Ranger J. A. Sharp and W. O. Sauder, county agent of Saguache county. The boys will co-operate with the United States forestry service, the extension service of the Colorado Agricultural college and the state forestry department. The idea is to teach the boys about trees, and encourage them to develop into citizens who will guard and preserve our forest resources.

"How I Am Making Money Out of My Farm."

Awards in Letter Writing Contest.

After giving careful consideration of the letters written by our readers on the subject "How I Am Making Money Out of My Farm," prizes have been awarded as follows:

First Prize, $5—Roy Marple, Cope, Washington county, Colo.

Second Prize, $3—J. F. Vell, Maybell, Moffat county, Colo.

Third Prize, $2—J. C. Dolson, Billings, Montana.

Honorable mention letters:

Rachel Posey Cameron, San Simon, Ariz.; Frank Jemmett, Alridge, Idaho; and Sam C. Cook, Seibert, Kit Carson county, Colo.

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Economy paints are made fresh every day and are **guaranteed** to suit. If, after using 2 gal. on your buildings, they are not satisfactory, return the balance at our expense and we will refund all you paid.

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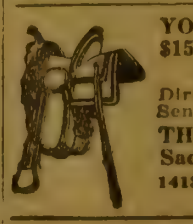

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ALFALFA $10 hundred; Red Clover $15; Alsike, $15; Sudan, $6.50; Timothy, $5.50; Grimm Alfalfa, $30; Blue Grass, $25; Sweet Clover, $8. Sacks free. We make prompt shipment. If our seeds do not please you in every way you are at liberty to return to us and get ALL of your money back. Order now, as prices are going higher. Order right from this ad or send for samples.
RELIABLE SEED CO., SALINA, KAN.

Western Farm Life

A Western Magazine for Western Farmers and Stockmen

VOL. XXIV. DENVER, COLORADO, JUNE 15, 1922. No. 12.

Feeders Learning to Finish Calves for the Market

CONSUMERS ARE INCREASINGLY FAVORING BABY BEEF CARCASSES

By George C. Wheeler.

WITH the breaking up of the open range and the passing of the big herds of cattle some years ago, the five- and six-year-old steer could no longer be grown and marketed at a profit, declared ex-Governor Ammons in addressing the live-stock men and feeders gathered at Fort Collins to study the experimental feeding of steers Feeders' Day. He pointed out that this change was the beginning of the shift to baby beef by cattle producers, but too few have yet realized the new conditions. Cattlemen nowadays are confronted with high-priced pastures and other expenses such as make it necessary to study more closely economy of production. "I have seen many crops of three- and four-year-old steers that did not weigh any more than yearlings could be made to weigh by following the baby beef method of growing and finishing," said the speaker. "One of these old type animals weighing perhaps 1,000 pounds would not dress out more than 500 pounds of meat and scarcely any of it of high quality. The well bred, quickly grown animal weighing 1,000 pounds will often dress 600 or 650 pounds, with fully a third of the carcass high quality, high-priced meat."

Calves Must Be Started Right.

"If the calf is started right and is kept growing from birth," said Governor Ammons in conclusion, "he can be taken right from the pasture to the feed lot in a growing condition and finished for market with a short feed at a weight conforming to present consumptive demands. The agricultural college, the proprietors of great breeding herds, boys' baby beef clubs, vocational high schools, and county agents have begun a most important campaign which will lead to the production of a better quality of beef, with a greater profit to the producer and add materially to the progress and development of the beef making industry."

In general there are two main causes for the increased tendency among feeders to put prime finish on yearlings of high quality. First, an increased demand by consumers for small cuts of high-quality beef; second, certain changes in methods of beef production brought on by increased cost of production. General conditions within the past few years have indicated that no class of beef as yet produced more nearly fulfills the requirements of both producer and consumer as does the class known as "baby beef." Taking present feed-lot and market conditions as a criterion, it would appear that these tendencies are growing and that the production of "baby beef" in the future will be even more popular than it is at present.

Quality Breeding Makes Baby Beef Possible.

In the early days of the cattle industry, cattle were kept on the ranges until from three to five years of age. The use of better bulls, with consequent general improvement in quality and maturing ability of market cattle, together with heavier grain feeding, has made it possible to put just as much beef on the market at from thirteen to twenty months of age. The average age at which "baby beef" is put on the market at the present time is probably between fourteen and sixteen months, and feeders seem to think that in time with improvements in breeding herds and feedlot methods the same weight of carcass, with more quality, may be put on the market at even an earlier age.

Top prices and prices that will pay for the cost of production are given for "little" cattle when they carry "prime" finish. To put this finish on this type of prime cattle requires experience and skill. At the present time commission men complain of many would-be baby beeves being shipped to market in half fat condition. Markets pay a premium for the extra finish, but half fat yearlings are marketable only at a discount. An axiom in stock yards is, "Few feeders are able to turn out a fat yearling."

Advantages of Finishing Yearlings.

The following are advantages mentioned by feeders of experience as reasons why they favor finishing their cattle as baby beef:

First—The younger cattle make more gains on the same amount of feed than do the cattle with more age. To get such gains, however, it is necessary that the calves be pushed from the time they are dropped. In addition to the milk the calf gets from its dam, it should be given a grain ration just as soon as it will begin to eat. As expressed by one feeder, "The calf should be fed so that it will never know when it is weaned."

Second—The money invested in cattle is turned faster. Under old range conditions money invested in cattle was realized upon only once in from three to five years. By feeding out calves as baby beef, money can be turned in eighteen months.

Third—By feeding as yearlings the herd to be maintained on the farm is smaller, and pasture, forage, grain, etc., which were once used for yearlings and two and three-year-olds, can now be used to increase the number of cows kept.

Fourth—Open heifers find just as ready market as the steers. This is true in no case after the time the heifers have passed the two-year-old stage. Yearling heifers finish out even more rapidly than do the steers, and marketing them at this age is a big advantage since there is no other time in their lives when markets will treat them as favorably.

Fifth—The baby beef market at the present time is the most stable of all the cattle markets. Baby beef has, during the past few years, had a market all its own, and probably in most cases regardless of other cattle market conditions. Baby beeves will not take on as high a degree of finish as will two-year-old cattle, but nevertheless the yearlings with somewhat less finish have usually sold at a higher figure than two-year-olds.

Strong Summer Demand for Light Beef.

During the past few years the Christmas market has been very favorable toward all cattle with quality and prime finish, quite a proportion of which are baby beef. Most of the baby beef, however, goes on the market during the months of May, June and July. The market at this time is generally good, and in fact generally stays good throughout the summer, for during the middle and late summer months few prime cattle are for sale. Most of the cattle offered are half fat yearlings.

In feeding for the December market, fall-born calves are generally used. The following schedule may be used with baby beeves intended for the December market: Have the calves dropped in September and October. Begin giving them light grain ration, in addition to their dam's milk, at about twelve months of age, or about November 1. Wean them during April and May, or as late as possible, so that they can be turned directly upon grass. At weaning time begin increasing their grain ration until by the middle of July, or August 1, they are getting about all the grain they will take. Keep them on heavy grain feed until pastures begin to diminish, and then add silage with clover or alfalfa, either one or both, to the ration. They should be ready to market from the middle of November to the middle of December.

Starting Spring Calves on Feed.

Spring-born calves are of a more suitable age for finishing for late spring or early summer markets. If these calves are born in March or April, they should begin to take a little grain by May or June. They would probably be weaned during September and October. At this time the grain ration should be somewhat increased, and then increased again when grass is gone. As grazing decreases in the fall, silage and alfalfa should be added to the ration.

At this time and up until December or January the calves should get enough of this ration to keep them growing nicely. They should be put on heavy feed during the months of December and January. These cattle should be ready to market during May and June.

Variety of High Quality Feeds Essential.

High quality feeds and variety are essentials for proper finish in feeding baby beef. The young calves should be given grain as soon as they will take it. One feeder recommends equal parts by measure of shelled corn and oats. Many feeders prefer to grind or crush these two feeds. Some feeders prefer shelled corn to cornmeal or crushed corn as feed for calves, as it stimulates the secretion of the digestive juices.

In his bulletin "Beef Production in Colorado," Professor Charles I. Bray suggests the following as good finishing rations for baby beef: Alfalfa, 3 pounds; corn silage, 6 pounds; oat straw, 2 pounds; corn chop, 3 pounds; oat chop, 3 pounds; beet molasses, 2 pounds; and linseed oil meal, 1 pound; or prairie hay, 4 pounds; cane or kafir silage, 6 pounds; barley chop, 3 pounds; gluten feed, 3 pounds, and cottonseed meal, 1 pound. These rations are for feeding in the fall after weaning time. For feeding fall calves on pasture the same rations are suitable without the hay and silage.

Prof. Bray points out in his bulletin that baby beef production is a phase of the beef industry better suited to the relatively small farm or ranch on high-priced land than to the western range. The sire of baby beef cattle should be purebred bulls of quick-maturing, thick-fleshed type and compact rather than rangy. Only high-grade

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A grand champion carlot of breeding heifers, bred and shown by John Painter & Sons, Roggen, Colo. The type required for baby beef production.

Cultivation and Its Effect on Moisture in the Soil

DEEPER THE MULCH MADE BY CULTIVATOR, THE LESS THE LOSS OF MOISTURE.

E. R. Parsons.

IN farming without irrigation, the prime motive in all our operations is to conserve moisture. When ground is kept broken on the surface by the cultivator, disk, harrow, or other implements, the moisture does not escape into the atmosphere as easily as it does when the surface is allowed to settle and bake after rain. The reason is quite plain. Soil and water require more room than soil alone, and as the water dries out there is considerable shrinkage. This shrinkage is represented by small air holes, fissures and cracks which go deeper and deeper as the soil dries and provides a way out for practically all the moisture in the ground. Cultivation stops this process and plugs up the holes.

Even under cultivation there is some loss of moisture for the soil is never air-tight, unless water-logged, but by an exhaustive series of experiments carried out by the Agricultural College of New Mexico some years ago it was shown that the deeper the mulch made by the cultivator, the less the loss of moisture. Unfortunately, the depth of the mulch must be limited by the depth of plowing and those that plow shallow must also cultivate shallow, or there will be no room left for the top roots which luxuriate in the seed bed. On the other hand, the man that plows nine to ten inches can easily spare three or even four for the mulch and will conserve moisture much more effectively than he who plows five or six inches and cultivates two.

Deep Cultivation Doesn't Affect Root System.

There are some who think that we should not cultivate deep for fear of cutting roots. The fact is that roots do not grow in loose ground which is kept cultivated. They cannot absorb moisture from the granules, except under pressure, and they can acquire this pressure contact only by forcing their way between particles in well settled, or packed, soil; therefore, in cultivating corn, for instance, there will be no roots in the mulch until after it has been laid by, then if a rain has settled the surface, roots will form in it and if the farmer should put in fall rye with the cultivator in August between the rows he will naturally cut whatever roots have been formed close to the top, but even in this case we have never found that it appreciably affected the yield of corn.

In the matter of potatoes, there is also an unfounded belief that if the farmer relies on deep cultivation he may cut the tubers. This cannot happen unless he works too close to the row. At first he can cultivate quite near to the plants, later he can tell about where the tubers are by watching the foliage, for the potatoes seldom get any further away from the parent stem than the leaves which serve the useful purpose of providing shade for them. In raising this crop it is most important that the operator should not be afraid of thorough cultivation about three inches deep, and it can be kept up until the tubers stop growing. This cultivation is so necessary because if there should be a shortage of moisture down below during a dry spell, the potatoes, although only half size, will stop growing and ripen up, which means that as soon as a rain comes they will all sprout and the crop be ruined.

How Often to Cultivate.

A question often asked is, "How often should a crop be cultivated?" We found generally that sufficient cultivation to keep the row crops clean of weeds was usually enough for moisture conservation purposes, unless a crust should form late in the season, when we would again go through the rows, if the corn was high, using a single horse cultivator. With the same implement, fall rye can be planted in the interspaces in August and by the time the corn is in the silo will be almost ready for pasture.

It is often advisable to cultivate winter wheat and spring grain with the harrow before it is jointed and with the spring tooth weeder when it is too high for the harrow. The action of these implements and the tramping of the horses rarely hurt the crop, or the yield, in any case it is waste of time to do this, if the rains are coming pretty regularly, and after the weather begins to settle and look dry a mulch is of great advantage to the crop in carrying it over a dry spell. If winter wheat has been overpacked by the tramping of cattle pasturing it, the only thing that will bring it out is a good harrowing. When the top soil has been lifted by freezing and thawing so that some of the roots are almost out of the ground, it should not be harrowed or pastured, a smooth roller may help it, but not one with a cutting or corrugated edge.

Alfalfa Should Be Cultivated.

Does it pay to cultivate a good stand of alfalfa? It certainly does. The alfalfa field particularly when pastured in the fall becomes hard on the surface and much overpacked by the tramping of cattle. Such a condition prevents the quick absorption of the precipitation and is injurious to the crowns. Even when not pastured, the stand is always benefited by a thorough working over with the disk or alfalfa renovator made for this special purpose and used in the spring before the growing period. Some use one of these implements after each cutting and it is our experience that the yield is always better for such cultivation.

We are sometimes asked if it pays to cultivate row crops in hot, dry weather when the crust has been broken and there is already a good mulch on the surface. It does not, for cultivation does not make moisture, it only conserves the water already in the ground, and it is better in hot weather not to disturb a good mulch and lose moisture by turning it over in the heat. Another reason for not cultivating unnecessarily is that this work uses up a certain amount of humus and although we have to sacrifice a small portion of this for the sake of moisture, the less we lose the better. It used to be one of the favorite arguments of some of the men of the Department of Agriculture in proving that our brand of agriculture was impossible that cultivation destroyed the soil and that for the same reason summer fallowing could end only in disaster.

These views and others were openly advanced at the Dry Farm Congresses some years ago, but farmers knew different, for they found that by plowing deep and mixing the surface humus from the decaying sod with a large amount of dirt the loss from cultivation was reduced to a minimum and could easily be offset by plowing under a green crop once in awhile, or even a crop of weeds when preparing the summer fallow in the late spring or early summer.

Another point not to be missed in using the cultivator, or any other implement, is that most of the soil fertility or more exactly mineral plant food used by the plant is developed by working and weathering the soil, which means nothing more or less than cracking the granules so that the water can form a soil solution in the same way that we grind up the berries to make coffee. The friction from every implement that we use breaks granules and liberates soil fertility and it is probably an even break between the loss of humus and the gain in mineral matter, and since we also conserve the moisture at the same time, to say nothing of destroying the weeds, the advantage is all on the side of intelligent cultivation.

There is no object in cultivating when the crop is already protected by a good mulch which has not been rained on enough to settle it so that it has baked and cracked. The smooth dust mulch is not recommended in a country where it may rain at any time, for although a good conserver of moisture, it is a poor absorber. The best all-purpose mulch should be at least three inches deep and rough enough to impede run off and help catch the rain. The cultivator should leave small furrows on the surface of the ground and for corn and other row crops six blades for the ordinary two-horse implement are sufficient.

Cultivation of Summer Fallow.

A question often asked is how often should the summer fallow be cultivated? Enough to keep the weeds out will usually be sufficient to hold the moisture. On sandy soil the harrow can often be used satisfactorily. For weeds, the spring-tooth is one of the best implements. On soil which is heavy and does not take water satisfactorily, the disk should be used criss-crossing the whole field without lapping, for the ridges running both ways will dam back the water and hold it until it soaks in.

In the same way that cultivation mulches the seed bed, the deep plowing of the seed bed mulches the subsoil, for it is found that under such plowing the loss of moisture from the subsoil is practically nil, while under shallow plowing the top of the subsoil, or hardpan, under the plow sole often becomes so dry that the roots cannot force their way into it. This is a most important matter in raising crops, for their roots may attain a depth of from five to ten feet when the subsoil is in condition and the yield will be correspondingly large.

Keeping Up the Milk Flow in Summer

COWS MUST HAVE ABUNDANCE OF FEED AND BE KEPT COMFORTABLE.

G. C. Wheeler.

UNLESS you tempt your milk cows with feed they like especially well, you will find it difficult to keep up the milk flow in hot weather. Keeping the cows from falling off during the hot weather is a problem with which all dairymen have to contend. You cannot expect cows to keep up their milk during the summer unless you do everything possible to make them comfortable and make it easy for them to get plenty to eat, and give them free access to an abundance of good cool water.

Must Supplement Short Pasture.

In hot weather cows will not spend enough time grazing, even though there may be an abundance of feed in the pasture. Usually the pastures get short when the weather gets hot and the cows have hard work getting enough feed to keep up their milk. They must be saved every exertion possible. It helps some to let them graze at night or very early in the morning, if there is grass or green feed near the barn. A patch of Sudan grass is a big help as a supplemental pasture during the hot weather. Dairymen who have tried this crop report that it is a great help in providing cows the green feed they need and in such abundance that they can fill up quickly and seek the shade.

Feeding heavier grain rations will, of course, help to keep up the milk, but it is not economical to substitute grain for the bulky feeds. The first principle in the economical feeding of cows is to get them to eat a lot of hay, silage and other bulky feeds. In the summer when they are accustomed to grass they will not eat much dry feed, unless it be good quality alfalfa hay. On farms where there is an abundance of alfalfa, this can be used to supplement the pastures during the hot, dry weather.

Supply Plenty of Succulent Feed.

It is difficult to get cows up in their milk again after they have once gone off during a hot spell, therefore it is important to avoid the shrink if possible. If there is any green feed big enough to cut, give it to the cows when it is too hot for them to get enough in the pasture. Do not be afraid to go into a field of corn and cut a few armfuls for the cows. It will pay big in keeping up the milk flow during a hot spell when they would not otherwise get enough to eat.

The summer silo is the simplest and most practicable means of insuring plenty of feed for the milk cows during the summer period. If you do not already have a silo on your farm, investigate this method of providing cheap feed in abundance. The silo has been generally accepted as almost a necessity in providing cheap feed for the winter and the summer silo is the next step. If you know of anyone feeding silage to cows during the summer while the pastures are short, go and learn for yourself what results he is getting. The silo is the solution of one of our biggest dairy problems and dairymen will more and more have to learn to depend on silage as the cheapest and best feed to keep up the milk flow during the summer.

Protect Cows From Heat.

Providing shade will help some in the production of milk during the summer. If there are no shade trees in the pasture, arrange to let the cows get under a shed open to all the breezes that blow. When given their choice, cattle always prefer shade where the air moves freely. Have you ever noticed how cattle always go to the highest point in the pasture on a hot day, and if there are a few trees on this point, it is the most popular place in the pasture when it is hot? If you have to provide artificial shade be sure to put it where the air stirs freely.

The whole matter of keeping up the milk flow in summer sums itself up in doing everything possible to make the cows comfortable and seeing that they get an abundance of palatable feed.

Good pasture is basis of economical feeding of milk cows during summer season.

Returns on Contract-Fed Steers.

The ninety head of two-year-old purebred steers fed by E. P. Dunlap of Aurora, Colo., under contract, were marketed in Kansas City May 1 for $8.35 a hundred. They averaged 1,142 pounds, which was a shrink of only thirteen pounds to the steer from the weights in the Denver yards. The cattle weighed in to Mr. Dunlap at 843 pounds, thus making the average gain upon which he was paid 299 pounds to the steer. His total return for the gains after paying the cost of feed in the yards and en route was $2,172.86, or $24.13 a steer. The cattle dressed out 61.4 per cent. W. A. Braiden, who bred these cattle in the San Luis valley, was very well pleased with the result.

Rates Reduced on Farm Loans.

Commissioner Lobdell of the Federal Farm Loan Bureau of Washington, announced a reduction in the rate of interest charged farmers by Federal Land Banks from 6 per cent to 5½ per cent. This new rate of interest was effective June 1.

How I Am Making Money on My Plains Farm

HOGS AND DIVERSIFIED FARMING METHODS TIDE OVER HARD TIMES

Roy Marple.

IN writing on the subject, "How I Am Making Money Out of My Farm," I cannot place much emphasis on the "am," although I feel that it is some achievement to be able to face the world and not have to admit that one is loosing. I am making some money farming, however, and thankful for it.

My farm consists of three quarter sections, with 125 acres under cultivation, on which I raise about all the crops adapted to this locality. Three hundred and twenty acres of the farm is fenced, forty acres of it hog-tight and used as pasture for a herd of purebred hogs, the basis of my farming. On the cultivated land outside the hog pasture I usually raise wheat and corn alternately and of about equal acreage. Corn following wheat rarely ever yields below twenty-five bushels and I have raised forty bushels to the acre in a favorable season. Wheat following corn has never made a yield below twenty bushels and as high as fifty bushels to the acre under favorable conditions.

Sudan Good Hog Pasture.

For hog pasture my main crop is Sudan grass, which makes a splendid annual grass if it is mown down as soon as it starts to joint. By this method you can have a good tender growth coming on from the time the grass gets large enough to pasture until frost comes, at which time the hogs intended for market, are turned into the corn to "husk" the crop. The brood sows and gilts kept for sale or my own use as breeders are left in the pasture and fed so they do not become too fat.

My principal farming project is hog raising for the purebred trade. However, I do not care to convey the idea that all the purebred hogs I raise are used for breeding purposes. I have been selecting the best of the herd for a number of years and about the limit I am able to conscientiously recommend to a prospective purchaser is 30 per cent. The inferior pigs are fed out and sold on the market. I have twelve brood sows which I consider is about all I need to supply my trade and consume what surplus grain I have. I have practiced the two-litter a year method, but do not know whether it pays or not. So much depends on other conditions that it must be worked out to suit individual years.

Chickens? Yes, we keep them purebred too. I said "we" advisedly, because the chicken business is the wife's job, except when it storms or we need some money to buy breeding stock. Profitable? Yes, decidedly so. The eggs are used to buy gas so the wife and family can get out once in a while for recreation, which I consider one of the most profitable assets of the ranch.

I also keep cattle, but not many. I started in the purebred cattle business once, but found it unprofitable because of the scrub bulls that run on the range. Now, however, I keep scrubs too, so we are all doing alike—making nothing on cattle. I keep just enough cows to provide milk and butter for the family and have a little milk to take care of what pigs happen to fall behind the others in growth.

Suitable Farm Implements Needed.

Like many other farmers on the plains I have bought such farm implements as I found absolutely necessary and could not borrow. We are a neighborly lot and exchange tools as much as possible to keep down expenses. I use a hay loader, which I have found will handle all kinds of feed that a mower will cut, and with it I can load about as fast as the ordinary team will walk. I use it mostly for millet as we do not grow alfalfa and millet is my best hay crop. Cane also is grown, but usually is cut and bound, eliminating the necessity of a loader. I have found corn cutting unprofitable as a rule. Of course, like other things, it depends on the year. I prefer the combine harvester-thresher for wheat that makes a yield of twenty bushels and upwards, because if wheat is that heavy, there is a lot of work in harvesting and threshing it, and in such years feed usually is plentiful and the straw is not needed.

Truck Used for Hauling.

I am twenty-five miles from the railroad, so, of course, have an automobile and a motor truck. No farmer can afford to haul wheat that distance with teams. For hauling hogs there is nothing like a motor truck. You can take in a few hogs and bring back a few barrels of gas for the tractor, a load of lumber and do many things that it would take you two days to do with a team, and do it all in a half of a day. I often haul three loads each way in a day with a truck. That's one way of making money on the farm. I have a tractor, too, although I have only 125 acres under cultivation. It is not the acres that makes money on my farm, however, it's the bushels.

Grinding Feed With Tractor.

There is feed to grind the year round for the hogs. I do not feed whole grain to my hogs. I buy shelled corn and threshed barley and sometimes it is necessary to keep it until it is very dry and hard before it is fed, and that necessitates grinding. Wheat is a valuable hog feed when ground. I do not have the figures on it, but believe it pays any man to feed wheat to pigs when wheat is $1 or less a bushel. It does something to them that no other grain will do. I do not know what it is, but it does it.

We do not have an electric plant, but long ago realized it has a place on every farm and many times wished we had one.

Livestock Must Have Shelter.

In summing up, I wish to advise strongly against having any kind of animals until you have some place to keep them. We had an eight-inch snow this spring driven by a thirty-mile wind, and I am feeling about as good about it as anyone could. I had one hundred hogs on the place, forty-eight of them less than three weeks old, and not a single hog knew it snowed until I opened the barn in the morning to let them out for feed. I consider I saved $1,000 in having a barn for my pigs, and I guess saving $1,000 is just as good as making it. I have always worked on the plan that it is not what we raise and sell that makes us rich, it is what we save, and I am getting stronger in that belief every day.

Typewriter Means Better Business.

Another thing that makes money on my farm is a typewriter. I often write to a breeder and get a reply, poorly written, on poor paper, and I conclude the breeder's stock is the same—poorly bred and fed, so do not answer it. I believe I am no exception either, because I have often heard others of the same opinion. Usually if a breeder scrawls off a few lines with a pencil telling what he has, you may be sure his pedigrees are pretty much the same and very likely his stock, whereas if a typewriter is used, you present a clean-cut, well punctuated letter, fully describing what you have in a way that carries weight and conveys the fact that you are at least up-to-date in your correspondence.

Principal farming project on this farm is hog raising for the purebred trade.

Editor's Note—This is the first of several articles on the subject, 'How I Am Making Money Out of My Farm."

Market Outlook for Farm and Ranch Products

MAY WHEAT HAS MADE MANY SPECULATORS DIZZY AND SICK AT THE STOMACH

Edited by Glenn G. Hayes.

TRADING in May wheat began on August 24, 1921, with a range from $1.22¼ to $1.24¼. From this point the price advanced rather steadily to $1.42¾ on September 10. Then an eight weeks slump followed, marked by a couple of minor upturns of eight or ten cents each, to the low mark of $1.03¼ on November 4. After advancing to $1.19 in less than a month the price moved back to $1.10⅜ on December 15. On December 29 it reached $1.17½ and on January 3, 1922, touched $1.07½ once more. From this point an eight weeks advance began which culminated at $1.49⅞ on February 27, the highest point on the crop. Sixteen days later it had dropped to $1.29½, bounced up to $1.39¾ in three days more, then dropped off again to $1.29½ in the next nine days. After swinging over a five or six cent range several times it advanced from $1.30½ to $1.45 in four days, nearly 9 cents of it in one day, reaching the latter on April 17, and $1.49⅛ on April 22. After breaking to $1.39¾ in five days, it rallied to $1.46 in six days more, broke to $1.34½ in five days, advanced to $1.47½ in nine days, then nose-dived to $1.16 in two weeks, covering a range of 10¼ cents on one market day. Final trades were at a range of $1.16 to $1.17.

A lot of the speculators who are schooled in such performances were made dizzy and sick at the stomach by the market's action and all were extremely glad when the ride was over.

What part of the market's behavior was due to speculative maneuvers and attempted manipulation, it is impossible to say, but this influence undoubtedly has been dominant in the last two months. That a "deal" was on has been common talk for weeks. The undoing of one group of speculators caused the extreme decline at the end of May.

Cash wheat prices paralleled closely all of these gyrations of the May market wherein arises a just cause for complaint on the part of the producer. Now that it is all over, will the Board of Trade defenders please explain how speculation stabilizes prices? Or is this the exception that proves the rule? To an outsider looking in it would appear that the more completely the market was in control of the big speculative interest the more wild the movement of prices became.

Part of the trouble arises through the fact that so many contracts center in a given month. If conditions do not develop as rapidly as expected by those who have taken a stand on one side of the market or the other, the delivery months may arrive before those conditions become operative. Nevertheless, it is necessary to close all these contracts or in some cases replace them in a later delivery month which tends to disturb the market and causes erratic prices.

Good Market for Good Cattle.

Distinct widening of the spread in prices between common and choice cattle featured the last week. Bulls, canners and cutters, and common and medium butcher cows and heifers trended lower. The supply of common steers remains abnormally small and prices were practically unchanged, but revision downward in that sphere can be expected within a month.

Total receipts at ten leading markets were about 10 per cent lighter last week, but they remained approximately 10 per cent above normal for this time of year. At Chicago alone, the supply for May was next to the largest for that month on record. Better grades have been absorbed right along without difficulty. Eastern shipping orders and export buyers both have furnished support. Dressed beef trade in the east continues healthy with prices slightly higher last week and the hide market is working upward.

Runs from day to day carry a liberal sprinkling of heavy steers, but discrimination against them is slight. They will be practically cleaned up in a few weeks so that no fear exists of a repetition of last year's history, when the liquidation of long-fed steers held back for the market to recover was continued until Christmas. A generous supply of yearlings is reported on the horizon, but if not sold till ripe they will find a warm welcome. Otherwise they will come into competition with grassers a little later on.

Veal calf prices moved higher again last week, with the supply light and the dressed veal market sharply higher in the east. Northern markets for calves should show improvement fairly steadily, but southern (Turn to Page 12)

Recent Range of Livestock Prices at Our Principal Markets.

Cattle—	Denver.	Kansas City.	Omaha.
Choice and prime heavy steers (1100 lb. up)	.....	$8.10@ 9.10	$8.15@ 8.85
Good heavy steers	7.75@ 8.25	8.00@ 8.60	7.75@ 8.50
Common heavy steers	6.50@ 7.25	7.00@ 7.65	6.75@ 7.50
Good light steers	7.75@ 8.25	8.10@ 8.60	7.85@ 8.50
Common to choice butcher heifers	5.00@ 7.85	5.50@ 8.25	5.50@ 8.00
Common to choice butcher cows	4.00@ 6.85	4.25@ 6.65	4.50@ 7.00
Bologna and beef bulls	3.50@ 5.50	3.50@ 5.75	3.75@ 6.00
Canners and cutters, cows and heifers	2.25@ 3.50	2.50@ 4.25	3.00@ 4.75
Canner Steers	3.50@ 4.50	3.75@ 4.75	3.75@ 4.75
Common to choice feeders (1000 lb. up)	.....	6.25@ 8.10	5.75@ 8.00
Common to choice stocker steers	4.50@ 7.25	4.75@ 8.15	5.50@ 8.00
Common to choice stocker cows and heifers	3.50@ 5.60	3.50@ 6.25	4.50@ 6.25
Hogs—			
Top of Market	$ 10.30	$10.10@10.50	$ 10.35
Bulk of Sales	9.80@10.20	10.00@10.40	9.85@10.25
Heavy (250 lb. up)	9.60@10.10	10.20@10.50	9.90@10.25
Medium (200—250 lbs.)	9.80@10.25	10.15@10.55	10.00@10.30
Light (150—200 lb.)	9.90@10.30	10.10@10.45	10.15@10.35
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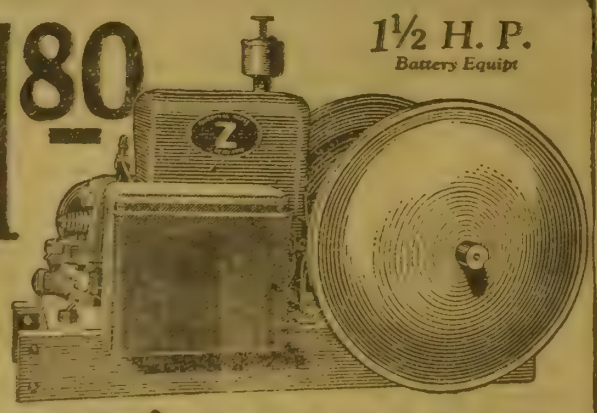

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Border Method of Irrigation.

Maintaining an adequate amount of moisture in the soil around the roots of plants is the primary purpose of irrigation. This can only be done by proper and efficient methods of application. Crop yields in irrigation farming depend for the most part on the uniform distribution at the right time of the proper amount of water to the soil. What has been designated as the border method of irrigation is described in detail in a recent bulletin published by the United States Department of Agriculture. It is one of several methods followed in western states adapted to a variety of soils and crops, and is growing rapidly in favor.

In irrigating by the border method the field is laid off in a series of strips, lands, or beds, by low, flat levees extending usually in the direction of the steepest slope. Sufficient water is turned into the upper end of each strip and this water moves down the slope in a thin sheet, moistening the soil to a given depth as it advances toward the lower end.

It is pointed out in this bulletin that few farmers have sufficient knowledge of the many factors entering into the choice of the most desirable method and merely imitate what their neighbors are doing, although it may not be the best adapted to their needs. So common is this practice that one frequently finds large areas in which the farms are all irrigated in the same way, even though widely differing in their physical conditions.

The principal condition favoring the border method of irrigating as outlined in the bulletin, is a smooth regular surface having a slope in one direction of about 2.5 inches to the hundred feet. It is possible to make borders on slopes one inch or less to the hundred feet and on steeper slopes up to two feet and more a hundred feet. Cases might be cited where borders have been used on slopes as great as seven and one-half feet to the hundred feet, but extra care must then be taken to prevent soil and crop erosion.

The amount of water which can be turned into the strip depends on the size of each strip, its slope, and other conditions. In narrow, short strips the head used may be reduced to half a cubic foot per second, or from twenty to twenty-five miners' inches, and in wide, long strips ten cubic feet per second may be none too large. A large volume of water cannot be handled successfully on steep slopes, but it is always possible to divide a head between two or more compartments.

The kind of crop to be grown must usually be considered in connection with the rotation of crops. It seldom pays to prepare a field for the border method for one crop. Since this method is well adapted to the irrigation of alfalfa, clover, and other forage crops, and also of all grains, the forage crops may be rotated with the grains without modifying the method. It is also possible to irrigate potatoes, sugar beets, and other rowed and cultivated crops by making a slight change in the borders, so that the latitude as regards rotation is rather wide.

The most favorable soil for borders is a free-working loam several feet deep, underlain by a more or less impervious subsoil. As the sheet of water flows down each strip, the pervious top soil is readily moistened and the tighter soil beneath prevents the waste of water in deep percolation. Borders are also very generally used where the subsoil as well as the top layer of soil is porous, not because such formations are the most favorable, but because no other method will do as well.

The cost of preparing land for the border method is low as compared with that required for most other methods if the physical conditions are favorable. Besides, it is usually feasible to obtain a fair crop at small cost by the use of temporary borders, and after the crop is harvested, the making of permanent borders may be undertaken without undoing much of the previous season's work.

The chief preliminary operations in the border method consist in making the necessary surveys and in laying out the borders in accordance with the requirements of the farm and the physical conditions. Closely related to these preliminary steps are the location of supply ditches or pipes and the main laterals, and the determination of their capacity. These in turn bring up the subject of water supply, its delivery in rotation periods, and the various structures, such as gates, checks, siphons, and drops, required for its proper control. Then follow the building of border levees, the preparation of the ground surface between borders, and the disposal of any waste water which may occur. These features are all considered in the government bulletin.

This valuable pamphlet for the irrigation farmer, which is entitled "The Border Method of Irrigation," can be obtained by writing to the Division of Publications, United States Department of Agriculture, Washington, D. C.

Avoiding Castration Losses.

Most farmers and stockmen castrate their animals themselves. There should be comparatively no loss in cattle from castration. One of our readers in Yuma county, Colo., writes that he has been having bad luck in castrating his cattle. They swell in the sheath, scrotum, and between the thighs and so far only one has been saved after developing these symptoms. He uses stock dip as disinfectant. Last fall he lost two out of a lot of twenty and has two about ready to die now out of a bunch of five. "Is it the dip, the knife, or in the calf," he asks.

"It is quite likely that the fault is neither in the dip, the knife, or the calf, but in the operator," says Dr. George H. Glover. "Animals will recover from very bad surgery if there is no infection. On the other hand, if infection takes place, even with the best surgical technique, the outcome is liable to be disastrous. Having failed under one method of procedure it will be well to change. The exercise of a little more care in cleanliness will not take long and will probably mean the difference between success and failure. If there is much swelling it will cause suspicion of malignant edema, which is caused by a specific germ, and which makes careful disinfection absolutely necessary. Possibly this or some other microorganism is common to the locality and which would make it very necessary to exercise more than ordinary precaution."

Dr. Glover suggests trying the following procedure: While the animal is being secured in a clean place, let the operator scrub his hands and arms with soap and water. Clean the finger nails, and place the instruments in a pan of disinfectant solution. Wash the scrotum with soap and water, followed by a disinfectant. Remove nearly one-third of the lower end of the scrotum to insure drainage. Sever the cord in the usual way. Disinfect the wound superficially. If swelling of the scrotum follows after two or three days, open the wounds to allow escape of the imprisoned pus and inject antiseptic solution twice daily. Reliable disinfectants are carbolic acid, 1 to 50 of water; creolin 3 per cent solution, and corrosive sublimate1 to 1000. There are of course other good disinfectants.

Popularity of Morgan Increases.

Because of its superiority in activity, hardiness, and stamina, the Morgan horse is increasing in popularity in the Southwest where stallions of the breed are being used to improve the saddle horses on the range. Used on the native light mares they produce a useful animal that satisfies the ranchers' demands.

At the Southwestern Exposition and Fat Stock Show, held at Fort Worth, Tex., March 11 to 18, this year, there was a particularly good show of the breed. Sixteen horses were exhibited and there was a strong class of aged stallions. Red Oak 5249 was the best aged stallion and champion Morgan. This horse, sired by General Gates, was developed at the United States Morgan Horse Farm at Middlebury, Vt. The Morgans were placed by one of the best known horse judges in the country, who described the champion as one of the finest horses he had ever seen.

As a result of the efforts of the United States Department of Agriculture in improving the Morgan and in stimulating a renewal of interest in this useful American breed, good breeding specimens are now found in many parts of the country. In order to obtain suitable remounts for the service the Army has placed Morgan stallions in Kansas, Missouri, Montana, Nebraska and Texas. A few are owned privately in Illinois, Missouri, and Iowa, but the stronghold of the breed remains in New England, particularly in Vermont, where it was first developed.

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Keep the grease cups screwed down at all times.

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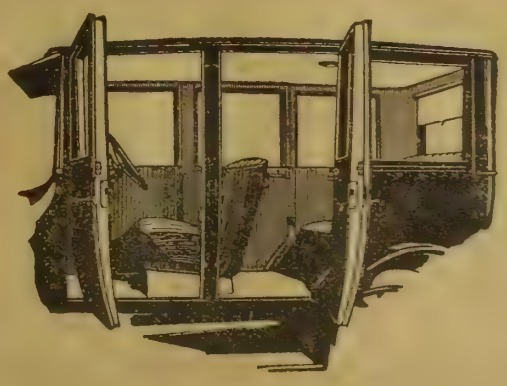

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Issued the 1st and 15th of Each Month

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Change of Address—When you move be sure to send us your change of address, so that you will not miss a single issue. Give both new and old address. Your subscription is paid in advance. The address label on your magazine indicates the date to which it is paid. If the address on the label is not correct and complete as to route and box number, please notify us at once. Complete address insures perfect delivery.

Make Partners of Your Children.

Do you ever talk over farm affairs with your children, giving them an opportunity to express an opinion or an idea occasionally? Or is all your talk, me, my, and I? Where this latter policy is followed children cannot help getting to feel in the course of time that they have little part in the affairs of the farm other than the work they do. Consulting with the boy about some farm operation arouses his interest. His advice may not be worth much at first, but he is being encouraged to think and will get to feeling that the whole family is concerned with the conduct of the farm business.

Parents on the farm are continually racking their brains to find means of getting the boys and girls interested in the farm and home. There is probably no one thing more likely to bring about this result than taking them into a limited partnership in some farm activity. The boy may be given a special piece of ground to cultivate to suit himself, or be entrusted with the ownership of some farm animal. The girl in like manner may be given a part in carrying on some of the special activities of the home.

It has been our observation that the parent who simply orders a child to do certain things, without ever offering a suggestion as to the whys and wherefores of the task, is doing little to arouse interest. Boys and girls often have visionary ideas about things and would like to experiment with their own ideas. Too often we are inclined to throw cold water on their little schemes. Better encourage them even though you know their little experiments will not work. It may cost something, but the loss will be small when compared with the value of the training the child is receiving.

Fighting the Weeds in Corn.

Every farm crop must compete to a greater or less extent with weeds, and too often the weeds seem to hold the balance of power. They are constantly drawing on the plant food and moisture of the soil when there frequently is barely enough for the crop. The cultivation of corn, kafir, or other rowed crop is primarily a fight against weeds. Tests made at many of our experiment stations seem to show that killing the weeds is the most important function of cultivation.

It is not an easy matter to keep ahead of the weeds. The methods to employ will differ with the kind of soil and the season. Careful preparation of the seed bed helps kill many of the weeds in the germinating stage and their control afterward is much easier than where this careful work has not been done. The method to follow is one that will destroy the weeds with the minimum of injury to the roots of the crop.

Controlling weeds on a farm is a matter that cannot be accomplished without carefully planning rotations and other intelligent methods of cultivation and tillage work, for weeds are ever with us and must be fought throughout the year.

Good Publicity for Colorado.

Under an act passed by the Twenty-second General Assembly, the Colorado State Board of Immigration was clothed with authority to collect agricultural information through the county assessors in the state. The information secured by the Board in this manner is compiled by the Immigration Bureau and from this material the Colorado Year Book is produced.

The first Year Book of the State of Colorado was issued in 1918. The information contained in the first book was very meager on account of the inability of the Board to secure authentic data. The book just issued for 1922 is very complete and gives much valuable statistical information relating to the state and its political subdivisions. It has been carefully edited so that reliable information can be easily sought out.

Among the subjects discussed are those pertaining to agriculture in Colorado, such as general farming, stock raising, dairying, horticulture, poultry, and bee keeping. Among the tabular matter is found the acreage and production of all of our principal crops by counties; the number of silos, farm tractors, and automobiles, by counties; the number of different kinds of livestock by counties. Also, the value of all farm property, land in farms, farm buildings, livestock, poultry, and farm implements, by counties.

The book is an interesting one for Colorado people and it is exceptionally valuable in an advertising way for the state, as it will supply eastern people with information about the State of Colorado and without question the information it contains will be a very important factor in bringing eastern people into the state to engage in farming and stock raising. It will also aid materially in attracting eastern capital seeking safe investment.

The Board of Immigration and the Assessor should be commended for their efforts, making this the most complete and authentic data ever furnished to the public on the resources of Colorado. Future legislatures should see to it that the Bureau of Immigration is given special encouragement along this and similar lines.

Day of Heavy Steer Past.

Stockmen and feeders who read aright the signs of the times cannot avoid the conclusion that the day of the heavy steer is past. Beef consumption has been at a low ebb for some time, largely because it has been too expensive for families of average means. Heavy cuts of beef are not readily salable. In the restaurants and on the dining cars this reduced consumption of the heavy cuts is most noticeable. Even in the markets of Boston, where the heavy steer has so long been in demand, the change is now in evidence and the 1,600 and 1,700 pound steer is being turned down.

Overcoming the tendency to discriminate against beef is necessary to the revival of the beef business. Nation-wide campaigns are now under way to promote the consumption of more beef. With the gradual return of improved industrial conditions the demand for beef may be expected to increase, but we must reckon with this tendency of the public to dodge weight in its beef purchases. The beef maker must recognize consumptive demands. This means that more quality cattle of light weight must be finished. A glance through the market papers shows that these are the cattle topping the markets right now. Hardly a market day has passed in Denver for the past few weeks without there being reports of baby beef topping the market. The cattle man or feeder who would keep in line with the trend of the times must recognize that economical beef production from now on is a matter of getting the greatest weight possible at an early age. Not only is it more economical to produce the maximum beef on the young animal, but producing this kind of beef will stimulate consumption.

Pure Water for Hogs.

There is nothing of greater importance in handling hogs, or any other animals for that matter, than an abundant supply of pure water. A pig cannot make its growth unless it has free access to water at all times. The greater part of an animal's body is water. This is the cheapest material that goes into its makeup. It would be poor policy to deprive hogs or any livestock of pure water in abundance when this is so essential to their proper growth and development.

Many hog growers use automatic waterers of some kind. These are so made as to keep water before them at all times, provided the source of supply is kept up. In the long run the cheapest source of water supply for livestock is to have a central reservoir and a system of piping carrying water wherever needed. On a farm so equipped water may be had wherever needed by the mere turn of a valve. There is no chore more tedious than carrying water to hogs or other animals in hot weather. When the rush of farm work is on the tendency always will be to give less than they really need. When water is carried to hogs in hot weather they will almost invariably get into the trough and later when they need water to drink there is none there.

An abundant supply of fresh water should be made one of the first considerations in preparing to handle hogs if any degree of success is to be expected.

Do You Read Advertisements?

In reading magazines or publications of any kind it is not a good plan to pass up the advertisements as something of no value. Advertisements must be recognized as timely, helpful news of world progress, and in agricultural publications particularly, of agricultural progress. Advertisements are as well worth careful reading as any other part of the publication. They tell of world progress and improvements in methods of conducting farming or the business of the world. You will read of comforts and conveniences unknown a generation ago, comforts now within the reach of even the farm home. A large proportion of advertising has to do with the things that lighten labor and increase profits. They will save you money. Do not miss the advertisements as you read your papers, and if you write to an advertiser, be sure to mention the paper in which you saw the advertisement. It is only through the returns from carrying advertising that we can furnish you a paper worth while.

Labor Saving in the Home.

In farming as in no other industry or calling the housewife is a partner in the business. Lack of efficiency in the farm home reacts directly on the efficiency of the farming project as a whole. On too many farms the buying of labor-saving equipment for the general farm work is recognized as necessary, while the purchase of equipment for promoting efficiency in the house is looked upon as more or less of a luxury. The big job of the housewife is to feed the family and the farm workers. Her work is largely done in the kitchen. Inconveniences in getting water into the house, disposing of waste, the necessity of taking countless unnecessary steps in connection with the work of the kitchen are tolerated which would not be considered for a moment in doing the work of the feed yards and barns. Work cannot be eliminated from the farm kitchen, but there are many conveniences possible at little expense which will greatly lessen the amount of drudgery associated with properly caring for a family. Cupboards, shelving and drawers, or specially designed cabinets, can be installed. The sink, an ironing board folding into the wall, suitable work tables, high stools, and running water, are a few of the easily installed conveniences which will lighten the work of the farm housewife. Why not make it a rule to think what labor-saving convenience might be put into the house every time something is introduced as a part of the outside equipment?

Using Seepage Water for Irrigation.

Seepage of water into the ground, long the bane of irrigators, is now being used to advantage in watering crops when the natural flow is insufficient, according to information given out by the United States Department of Agriculture. The winter and spring flow of mountain streams is spread out over gravel beds where the streams emerge into the valleys and the water is allowed to percolate into the ground beneath. There it is stored by nature until summer, and then pumped to the surface and used. That this method is effective is proved by the rise of water in wells used for pumping, and the method is now practiced on about a dozen streams in southern California.

We have but scratched the surface in the matter of utilization of our water resources. Scientific and engineer skill will more and more be called into action to conserve and use the water which now goes to waste.

War Finance money brought to the southern section of Carbon county, Wyoming, has resulted in adding seven carloads of high grade dairy cattle to the livestock equipment of the farms of the community. The funds were procured about three months ago for the specific purpose of financing the bringing in of dairy cattle. Men from the Saratoga neighborhood are now in Wisconsin to get four more carloads for that community. Already the results are noticeable in the increased shipments of cream going out from the farms and ranches of this section.

From the Nation's Capital

CONGRESS MAKING DETERMINED EFFORT TO ENACT RURAL CREDIT MEASURES.

E. E. Reynolds.

CONGRESS is evincing a determination to enact some legislation before it adjourns for the fall election that will convince the farmers of its desire to aid agriculture.

The passage of the Voigt bill, which prohibits the shipment of filled milk in interstate commerce, and the so-called "dirt farmer" bill, providing for eight instead of seven members of the Federal Reserve Board, and giving agriculture recognition on the board, are two proposed measures that stand out distinctively as meeting the demands of farmers and promising practical benefits to them.

The Voigt bill, having passed the House, May 21, by a vote of 256 to 40, is now on its way through the Senate, with the farm bloc actively promoting its passage. The declaration of the National Grange at its last session in Portland, Ore., that "a business which takes the butterfat out of milk and substitutes a vegetable fat lacking in vitamines, is a fraud upon producer and consumer alike," is thus accepted by Congress as a basis for passing this bill, which was opposed by a few manufacturers who have been making large profits on "counterfeit" milk, and favored by every farm organization.

"Dirt farmer" is a misnomer when used in connection with the bill enlarging the Federal Reserve Board. There is nothing in it requiring the President to appoint a farmer on the board. In selecting the six appointive members of the board the bill provides that not more than one of whom shall be selected from any one Federal Reserve district, and that the President shall have due regard to a fair representation of the financial, agricultural, industrial and commercial interests.

While the bill does not specify the appointment of a farmer, "the psychological effect of recognizing agriculture," as Dr. Atkeson of the National Grange says, "will be of tremendous value in the way of putting heart and hope and aspiration in the breasts of the farm folks."

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Rural Credit Measures Before Congress.—An earnest effort is being made by both branches of Congress to reach an agreement upon some sort of rural credit legislation that will be acceptable to the farmers and livestock raisers. There are two objects to be attained by such legislation. One is to enable the business farmer or stockman to properly finance his farming or stock raising operations until the time comes for orderly marketing his products. The other is designed to aid the man who needs help but has no basis for credit. It is difficult to frame a law that will meet the requirements of these two classes.

The rural credit committee appointed by Chairman Arthur Capper of the Senate farm bloc, is studying the dozen or more bills now in committee with the view to developing a new bill that will embody the most practicable features of all the rural credit bills. The House Banking and Currency Committee is also investigating the rural credit bills before it, and will attempt to draft a bill that will be satisfactory to the stockmen and farmers.

Congressman Sydney Anderson has been discussing the findings of the Congressional Joint Commission of Agricultural Inquiry in regard to rural credit legislation. These recommendations, which are contained in the Anderson-Lenroot bills, amend the Federal Farm Loan Act by establishing a farm credits department in each Federal Land bank, with authority to discount for national and state banks, trust companies or incorporated livestock loan companies' notes or other obligations the proceeds of which have been used for agricultural purposes or for the raising, fattening, or marketing of livestock, and to make loans direct to any co-operative association composed of persons engaged in producing staple agricultural products, if the notes representing such loans are secured by warehouse receipts covering such products, the loans having a maturity of six months to three years.

The reason why the commission decided to utilize the present banking system under the provisions of its bill, according to Representative Anderson, was that it recognized the need of getting the system into operation quickly. The Federal Land banks are already located in agricultural districts whose boundaries are well defined, and are now doing business with the farmers.

It was Mr. Anderson's opinion that the farmer's inability to finance himself properly is not due so much to a lack of credit as to the fact that present credit facilities are not adapted to his needs, the maturity of credit being too short to enable the farmer to use it to his advantage.

Congressman McFadden, chairman of the House Banking and Currency committee, has introduced the Capper-Meyer Federal Livestock Financing Corporation bill in the House, with a provision extending the operations of the act to include all farm products as well as livestock. This bill, together with the Norbeck "Farmers' Union" bill, and several other proposed measures, would extend the time limits and operations of the War Finance Corporation, while the Simmons bill would create an entirely new organization for financing farmers, similar to the Federal Farm Loan Board, and Thomas A. Edison is advocating the old Farmers' Alliance sub-treasury plan of issuing non-interest bearing certificates of credit based on government warehouse receipts.

Most of the big farm organization leaders are aiding Congress with the expectation that a really effective and satisfactory rural credit bill may be enacted into law. Benjamin C. Marsh, managing director of the Farmers' National Council, however, claims to see the hand of Wall Street in all these bills. The Capper-Meyer bill, he asserts, "seeks to shanghai the livestock growers on Wall Street's ship of state. It specifically provides that the Federal Farm Loan Board may prescribe the terms upon which livestock and the increase or increment thereof may be released for purposes of sale or otherwise and the application which shall be made of the proceeds thereof. In any case, the control of the livestock industry is to be taken out of the hands of the livestock growers, and this government agency, which is going to be more closely identified with these interests than at present, is to tell the farmers what they should do with the money which they get for their livestock."

The Anderson bill also does not meet the approval of Mr. Marsh. He says it is "just about the sort of a rural credit bill which we would expect a committee on agriculture, composed of seven lawyers, one publisher, and one rich landlord farmer, to recommend. We imagine that the investment bankers of the nation must have given their blessing, if not their advice in drafting the bill. Under the terms of this bill, farmers will have to pay at least 5 to 6 per cent upon livestock loans, possibly 7 or 8 per cent, while the government proposes to loan hundreds of millions of dollars to the financial interests to construct ships at 2 per cent interest. It would appear that the essential thing for Congress to do now is to create the Farm Products Export Corporation provided in the Norris bill(with the power to purchase large supplies of farm products for domestic purposes when the prices are being hammered down. Farmers must have cash and a fair price for their products. This is fully as imperative a need as credit of any sort."

That home gardener who is willing to play safe most of the time with the good old standbys of seed can afford to indulge in the fun of trying out the novelties of the seed catalogs once in a while.

LOOK AHEAD TO THRESHING TIME

Four farmers, all good friends, Henry Becker, Joe Sedlacek, and Peter and Arthur Anderson, of Springfield, Nebraska, went in together to buy a Goodyear Klingtite Belt in July of 1920. They threshed all their wheat that season, the crop of several other farms—more than 350 acres of wheat and oats—repeated the performance last year, and used the belt in corn-shredding and silo-filling after threshing.

Goodyear Klingtite Belts are all-weather belts. They are not affected by heat, cold or damp. Their Goodyear ply construction gives them long life. They need no breaking in.

Your local dealer has Goodyear Klingtite Belts. They are made in endless type for threshing, silo-filling, feed-grinding, wood-cutting, and other heavy duty, and in suitable lengths for lighter drives, such as cream-separating, electric light generating, water-pumping, etc. For further information about them, write to Goodyear, Akron, Ohio, or Los Angeles, Cal.

GOODYEAR

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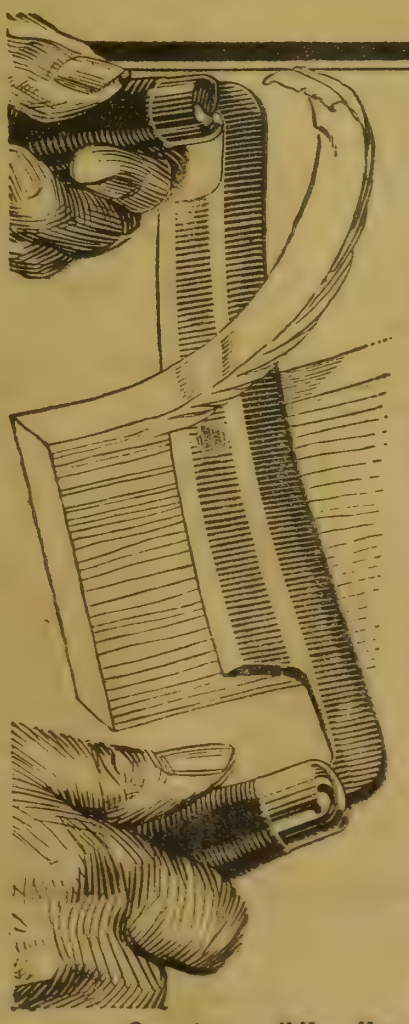

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Keen Kutter on any Tool signifies not only those merits expert workmen demand, but the practical strength and usefulness needed by men on the farm.

That is why a *Keen Kutter* Drawing Knife, with its one-piece blade of finest steel, gives long years of hard service and stands endless re-sharpening.

Depend on *Keen Kutter* tools to prove the best value for your money. Sold by leading Retailers everywhere.

"The recollection of QUALITY remains long after the PRICE is forgotten" —*E. C. Simmons*
Trade Mark Reg. U. S. Pat. Off.

Simmons Hardware Co.

Our prices on all Keen Kutter tools have been reduced.
Ask your Hardware Store about today's values.

KEEN KUTTER

A PURE petroleum product. Keeps the hair soft and smooth. The natural remedy for falling hair, dry scalp and dandruff.

Trial size sent for 10c, or free booklet, "Care of the Scalp and Hair", upon request.

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45 State Street New York

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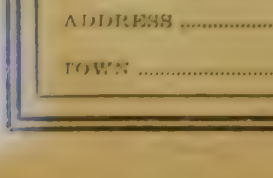
REG U S PAT OFF
HAIR TONIC

Western Farm Life
Gets the Business.

"That little ad got me just $127.50 worth of business, and I guess that's going some."
—R. H. Jandebeur, Alma, Neb.

P. S.—I wish to say that your paper is the best business getter I have ever used. My little classified ads sure get the business. Thanks to Western Farm Life. A. H. J.

Kill All Flies! THEY SPREAD DISEASE
Placed anywhere, DAISY FLY KILLER attracts and kills all flies. Neat, clean, ornamental, convenient and cheap. Lasts all season. Made of metal, can't spill or tip over; will not soil or injure anything. Guaranteed.



DAISY FLY KILLER at your dealer or
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Quality Kodak Finishing
By competent workers personally interested in results.
DEVELOP ROLLS, 10 CENTS
Prints, 4c to 6c. One-Day Service.
Ossen Photo Supply Co.
400 15th St., Denver, Colo.

The Rural Household

Questions about home problems promptly answered by letter and through the magazine. Letters from women containing helpful suggestions for improvement of rural life are always welcome. Address all communications to Mary G. Collopy, Editor Home Department, Western Farm Life, Denver, Colo.

A Song.

It came from the throat of a bird,
And quivered through the air,
To touch the silence of the hills,
With cadence wild and rare.
It was full of the joy of living
In Nature's great domain,
The flower-scented valleys
Caught an echo of the strain.

It breathed among the grasses
And whispered with the rill
Of a little brook that wander'd on
Through meadows sweet and still.
It entered at the doorway
Of a cottage by the sea,
To find a heart oppressed by pain,
Bereft of sympathy.

So it lingered near the casement
And murmured low and sweet,
Together with the sunbeams,
It helped to soothe Love's grief.
Then died away in silence
The melody unheard
By all save one who listened,
To the singing of a bird.
—Stella Gertrude Semple.

Your Summer Guests.

Those eastern folks are already writing about the hot weather "back there," so we know they will be asking us to meet a train one of these days. Summer company on the farm means added work in nearly every instance. Some women dread the thoughts of it; others look forward to the association with these friends from distant states.

Can we help each other with suggestions for lessening the work of such entertaining? Send us a letter, or a postal, giving your ideas.

Will these suggestions help you?

Use small rugs or bare floors, in bed rooms as much as possible.

Cook supper while you are cooking dinner, then you will not need a fire in your kitchen range in the evening. The kerosene stove will serve for warming over any dish.

Use paper napkins as much as possible.

Let each member of the family carry his dishes to the kitchen. Your guests will gladly follow suit, and you will be saved many steps.

Why roll cookies, except for special occasions? Use the same cooky recipe, but drop your cookies from the spoon. These require just about half the time, are just as attractive and just as nourishing.

Use your fireless cooker. (If you haven't one, make one. We will send you directions). Add legs to the fireless cooker, which you have had so long. Your energy will be saved when the back-breaking position is no longer necessary.

Seamless pans with rounded corners simplify cleaning.

Have supper on the lawn occasionally. The change will rest you and please your guests.

Do not try to plan every day for your guest who is on an extended visit. Let her plan her own time. She may surprise you with little sewing helps on the very day you think you should take her to town.

My Neighbor's Story.

Mrs. Watson said: "My girls work so well when we are getting ready to go somewhere, but I have to nag them all the time to get anything done other times." Mrs. Morgan, who also had three girls, answered: "Yes, children like to have some reason of their own for working. Did you ever let your oldest girl plan the day's work and you do the odd jobs? You pick up the chips and build the fire for her and feed the chickens while she makes the cake and —yes—she will be glad to do the dishes, too, if she is allowed to set the table as she wants it and perhaps will put a plant in the center as you would not bother to do. The other two girls will clean the bedrooms very nicely, if they may run over the hills afterwards for flowers to put on the dressers. My girls have taught me to enjoy my work. I am not tired after doing some task which has been a pleasure."—Contributed by a Colorado reader.

A Letter From Texas.

Every once in awhile the editor of the department is asked, "What do you hear from Miss Douglass, our former editor?" Of course, we all know that Erma Douglass has not existed since last September when she became Mrs. R. R. Lancaster of College Station, Texas. But we still claim her! That is why the editor wants to share with you portions of a very interesting letter just received from her.

"So many things have happened to our tribe and empire down here that I don't know what to start in on. There have been floods, there are flowers and ripe dewberries and most important of all—our new house. I've learned to appreciate bull frogs and to realize that a garden can (in some places) turn up its yellow toes and die from too much rain.

"The floods are unlike any you have there. I never saw clouds get rid of so much water with so little apparent fuss in so short a time. A cloud comes up, thunders a little, and all of a sudden somebody gives that sponge a squeeze and turns on the shower bath up above. In ten minutes, the garden, the flowers, the lawn—everything is just a moving lake and the water is still coming.

"Texas, pronounced in Spanish 'Tehas,' means 'of many flowers.' Much as I hate to admit it, not even your Colorado plains and hills have as many, nor as varied ones. Exquisite colors—blue bonnets (the State flower), scarlet paintbrushes, larkspur of every dainty color imaginable, all the gold of the black-eyed Susan, primroses, the magenta 'wine-cup,' and so many more that I haven't seen yet—all in masses of color.

"Our house is down among some oaks on a beautiful little lake. It is planned for every cool breeze that blows and still will be warm in the winter. The Gulf of Mexico sends up a breeze that has all the refreshing qualities of being right on the beach."

Mrs. Lancaster has not forgotten Western Farm Life. Her letter included two excellent home remedies which we shall use later.

Mend Your Broken China.

Many of us have favorite pieces of china—a teapot of grandmother's, or a large platter of Aunt Hettie's. When they break, we feel very sorry and quite helpless. Recently, there has been some very good work in china mending done by women in their own homes.

The U. S. Department of Agriculture has given valuable assistance in testing cements. There was need for a cement which would be permanent enough to endure washing and reasonably careful handling and one which would not be affected by climatic conditions. When all tests were made, the Department recommended what is known as "grandmother's white lead" process.

The white lead is the same as that which is used by artists working with oil paints. It is rubbed with the finger on the raw edge of the dish and the piece which is to be cemented into place. It is a good plan to rub down the edges a very little with emery paper to allow room for the thin layer of white lead, so that the dish, when completed, will not be distorted in shape. Do not use too much lead.

Melted sealing wax is dropped here and there on each side of the seam to hold the piece firmly in place, so that it cannot slip. If the dish is broken in several pieces, one piece after another can be added in the same way. Then set the dish away for eighteen months or two years. At the end of this time the sealing wax can be picked off, and the seams carefully scraped to remove any excess of white lead. You will find this process much easier than the old way where we tied the mended article together before putting it away to dry. Dishes mended in this way can be used for years.

Our Fashion Service.

All patterns 12 cents each. Address Western Farm Life, Pattern Department, 1518 Court Place, Denver, Colo.

Read This Before Ordering: Patterns ordered through this magazine are mailed promptly from the factory at Brooklyn, N. Y., and arrive in 10 to 13 days from time order reaches Western Farm Life. Be sure to specify size and number of patterns. Write your name and postoffice address plainly to avoid delay. These patterns are handled at cost, as a service to our women readers. The price of 12 cents includes postage.

3991—A Jaunty Apron Model. When you work in the garden or serve tea, and for other equally interesting indoor duties, this apron will afford pleasing protection. It is cut in 4 sizes: Small, 34—36; medium, 38—40; large, 42—44; extra large, 46—48 inches bust measure. A medium size requires 2⅝ yards of 36-inch material.

4006—A Practical House Dress. She who chooses this model for her work dress, will find every work day brighter because of the comfort and convenience which this style reflects. Dotted percale, and white linene are here combined. The pattern is cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size will require 6½ yards of 36-inch material. The width at the foot is about 2 yards.

3980—A Dainty Comfortable Frock. In dotted Swiss, challie, chintz or cretonne this style is ever attractive. The development is simple, and the dress will launder easily. Comfortable pockets are inserted under dainty flaps. The pattern is cut in four sizes: 1, 2, 3 and 5 years. A 3-year size will require 1½ yards of 36-inch material.

3982.—New "Overalls" for Our Boy. In these "rough and tumble" play days, your small son will find this style very comfortable, and will just revel in the joy of the roomy pockets. Denim, crash, gingham or repp, would be good materials for this model. It is cut in four sizes: 2, 3, 4 and 5 years. A 4-year size requires 2⅛ yards of 27-inch material.

CATALOGUE NOTICE.

Send 12c in silver or stamps for our UP-TO-DATE SPRING AND SUMMER 1922 CATALOGUE, showing color plates, and containing 500 designs of Ladies', Misses' and Children's Patterns, a concise and comprehensive article on dressmaking, also some points for the needle (Illustrating 30 of the various, simple stitches), all valuable hints to the home dressmaker.

Special Offer For the Next 15 Days

The New International Atlas of the World
with
The Rocky Mountain News or The Denver Times

New, accurate maps of all countries of the world and states of the Union, showing all recent boundary changes. New Maps of the new nations of the world.

The complete book measures 10½x15 inches. It comprises 144 pages, 80 pages being maps, beautifully engraved, clearly (not gaudily) colored. This volume weighs three pounds, which will enable you to judge of its size and value.

Bound in the richest of silk-grained cloth; title stamped from brass dies in ebony ink. A rich, substantial binding that will lend dignity to any library and will last for all time. A truly master Atlas in general contents as well as binding. If you've never been fortunate enough to own an Atlas, here's an opportunity to secure one just off the press.

Return this advertisement together with check or money order for $4.98 to cover six months' subscription to THE ROCKY MOUNTAIN NEWS (Daily and Sunday) and cost of packing and shipping the NEW INTERNATIONAL ATLAS OF THE WORLD

OFFER NO. 1
Only $4.98

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Gentlemen—Enclosed please find $..... in payment of your offer No. 1 [....] offer No. 2 [....] Check offer you select thus X please.

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Farmers' Service Bureau

Readers are invited to make generous use of this department. Questions regarding any branch of farming, livestock production, animal diseases, legal matters pertaining to the farm, homestead inquiries and the like cheerfully and promptly answered by letter and through the magazine. Address all communications to SERVICE BUREAU, WESTERN FARM LIFE, Denver, Colorado.

Proper Type of Roller.

You mention the western roller type of packer. Is the tool known as the Culti-Packer a good kind of roller?—C. W. F., Weld county, Colo.

The Culti-Packer is of the right type and will do good work.—E. R. Parsons.

Damage From Horses.

A neighbor's horses have formed the habit of breaking almost any gate or fence I can put up. They are doing me a lot of damage. The owner claims they have a right to run at large on the range. Can I put them up and sell them for damage and feed?—C. P., Costilla county, Colo.

Your remedy is to bring suit against the owner of the horses for damages.—Hamlet J. Barry, Equitable Building, Denver.

Market for Turkey Feathers.

Is there any market for clean turkey feathers.—O. L. E., Pueblo county, Colo.

There is no local market and the price in eastern markets is not high enough to bring any return after paying the freight.—G. C. W.

Owner Must Remove Hay.

A sold a stack of hay to B and received his pay. B hauled half of the hay away at once. The remainder still remains on A's place. It has been more than a year since the sale. How long can B leave the hay there? Can A force him to move it?—T. R. D., Montana.

Notify the buyer of the hay that you hold it subject to his order, and that unless he calls for it at a definite time named by you, that you will sell the same to the highest bidder for his account for storage.—Hamlet J. Barry, Equitable Bldg., Denver.

Right to Sell Homestead.

We have 320 acres, our original homestead, and an additional 320 acres. Can I sell my original homestead and hold the remaining?—W. E. M., Las Animas county, Colo.

I see no reason why you cannot sell that which is your own. Comply with the law.—Hamlet J. Barry, Equitable Building, Denver.

Sudan Grass for Idaho.

Can you tell me anything about Sudan grass and where to obtain seed?—R. O. B., Idaho.

Sudan grass belongs to the sorghum family and therefore is a warm weather plant. It is becoming very popular as a hay crop and also for supplemental pasture in the plains regions farther south. It is questionable whether much could be expected of it in the latitude of Idaho. Write to the Idaho experiment station at Moscow for detailed information as to its adaptability in that state.—G. C. W.

Changing Curve of Horns.

Can I change the curve of the horns of a two-year-old Hereford bull? They are turning up and I want to lower them. Where can I get the necessary weights?—A. C. P., Wyoming.

It may not be an easy matter to change the curve of the bull's horns very materially, due to his age, but by the use of heavy weights something may be accomplished. For weights write to the Weston Manufacturing & Supply Company, 1938 Speer Boulevard, Denver. In writing give some details as to age of bull and ask for suggestions as to size of weights to use.—G. C. W.

Use Water-Glass But Once.

If I take eggs out of water-glass solution for use or to sell, can I use the solution over again? I am storing eggs in candy buckets, using the Government formula for preserving in the sodium silicate solution. Is there anything besides oyster shell to keep hens from laying soft-shelled eggs?—Mrs. L. G., Ari[illegible].

It is not generally considered wise to use the water-glass solution more than once. If the first batch of eggs are in only a short time, it might be all right, but a solution which has been used for keeping eggs any length of time should not be used again.

There is probably nothing which you can purchase that is better than the oyster shell to supply the lime hens need.—G. C. W.

Wife's Right in Property.

A husband and wife go to New Mexico and buy two places with houses and improvements. The wife paid for the property and the deed was a joint deed. After six years the husband and wife separate, the wife going to Utah and getting a divorce. Two years later she re-marries. What rights has she in the New Mexico property upon which her former husband is now living. How shall she proceed to obtain her rights in this property.—Mrs. N. E. S., Utah.

The remedy is a suit in partition or similar suit to have the properties divided. The fact of the re-marriage in another state would make no difference.—Hamlet J. Barry, Equitable Building, Denver.

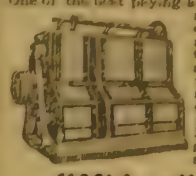
What Breed of Hogs?

What breed of hogs is best adapted to this locality? The altitude is 7,500 feet. While the altitude may not affect the hogs directly, it does affect them indirectly on account of the fact that we can only raise certain kinds of feeds. Corn is not a satisfactory crop. The climate requires a hardy hog and a good forager as we must make large use of alfalfa.—J. W. D., Conejos county, Colo.

Hogs of almost any breed will adapt themselves to such conditions as you mention. Corn is not essential to pork production. A good way to get hogs of the right type or breed would be to investigate among the farmers of the valley and find out what kinds are giving good results. In choice of a breed it is well to consider that certain breeds are much more commonly grown within the state than others. For example, Durocs are more widely grown than any other breed perhaps, and without advocating this breed over others the matter of getting breeding stock should be considered. The Hampshire is a good breed and is coming to the front. The Poland China also is a popular breed. You could not go wrong in selecting a good type of hogs from any of these breeds.—G. C. W.

You Can Make Money Milling Flour

One of the best paying and most dignified businesses you can get in or put your boy in now always, is flour milling. On a comparatively small investment, and without any previous milling experience you can own and run the wonderful "Midget" Marvel Mill and make good money from the start.



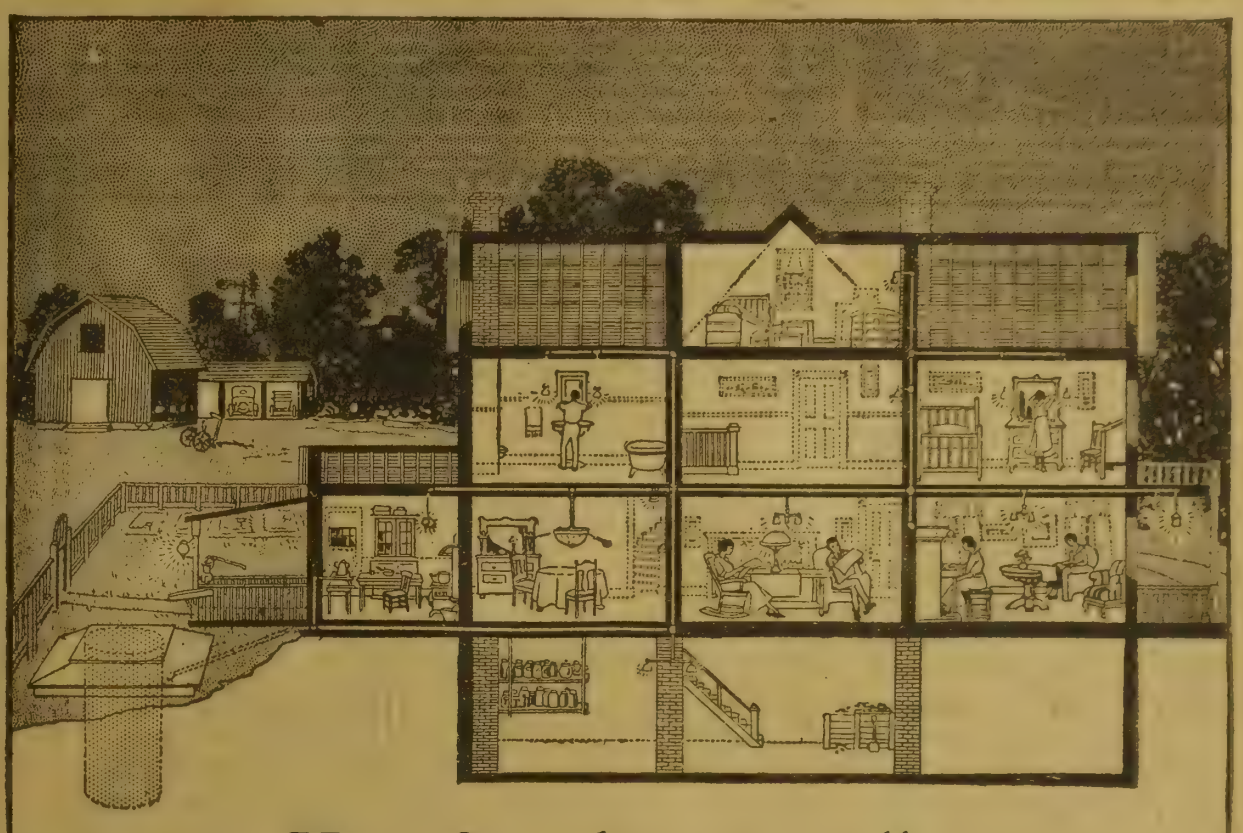
"Midget" Marvel

Self-Contained Roller Flour Mill

Saves the high freights on wheat out and flour and feed in. "The first eight months I made a net profit of over $6000," says A. H. Ling, Jetmore, Kan.; "My profits from the 'Midget' Marvel average right around $40 per day." Chas. M. McKinney, Cooper, Tex.: "Was $600 in debt when I bought my 25 barrel "Midget," and the little mill pulled me clean out of the hole long before I bought my 40 barrel mill from you," says M. A. Kamm, Oxford, Mich.

Capacities: 15, 25, 50 and 100 barrels of as fine roller patent flour a day as any mill can make. Write for free book, "The Story of a Wonderful Flour Mill," trial offer, terms, etc.

Anglo-American Mill Company, Inc.
2174-2180 Trust Building, Owensboro, Ky.



How Simple to Install the Marvelous Colt "Gas Well"!

HERE is a cross-section of a farm house showing how the pipes carrying that wonderful carbide gas are run to every room from the COLT Lighting and Cooking plant.

Even though no provision was made for piping when the house was built it is a simple matter to pipe it now for Carbide Gas.

A good mechanic can set the COLT generator, pipe the average house and attach the handsome polished brass fixtures in about three or four days.

—without cluttering, upsetting and disturbing the whole house.

He works quietly from room to room.

Pipes are usually run between the partitions and under the floor—*always concealed* except in some cases where possibly in a room or two building construction prevents the running of pipe between a partition.

For illuminating the barn and outbuildings a shallow trench is dug from generator to barn, pipe laid and covered. After that, you can have the most brilliant, softest, *whitest* and most-spreading light ever discovered in your home. The *clearest* light to *read* by—the very easiest on the eyesight of the whole family.

And instantaneous flame for cooking at the touch of a finger. Even, sustained heat for a gas iron. With a water heater, piping hot water for washing, shaving and bathing.

And no more lamp-cleaning, filling, trimming or carrying—no insufferably hot coal or wood range in the kitchen during the summer months.

And you'll have a cooking and lighting system that is unequalled for simplicity, economy and little attention. The gas is made automatically by the generator. No expensive parts needing continual replacement—a lifelong investment.

PAY IN A YEAR
—
NO MONEY DOWN

Interesting? You should hear what 341,000 farmers say about Carbide lighting. Space won't permit us to tell you the wonderfully fascinating story of carbide lighting and the COLT—so just drop us a postcard and get the full story.

J. B. COLT COMPANY

30 East 42nd St., New York — 8th and Brannan, San Francisco

COLT TRADE MARK

Oldest and largest manufacturers of Carbide Lighting-and-Cooking Plants in the World

ESTABLISHED 1891

DOWDEN
THE PERFECT POTATO DIGGER
You harvest your ENTIRE CROP when you use the Dowden Digger. Does the work in half time and with half the help. Cuts labor costs in two.
Increases Your Profits
The Dowden Digger works in all soils, at all depths, on hillside and level. Noted for 30 years for its light draft and clean work. Simple, strong, durable. Low upkeep cost. Absolutely guaranteed.
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Send for circular. Investigate the Dowden Digger today.

Summer Fence Sale Direct to you Prices Smashed Again!
164 Styles Fence and Gates Satisfaction or money back Big FREE Book—
write us today OTTAWA MFG. CO.
285A Union Ave., Ottawa, Kansas.

Market Outlook for Farm and Ranch Products.

(Continued from Page 5).

points can look forward to a heavy supply most of the summer.

Cheaper Stock Cattle Later.

Shipments of stocker and feeder cattle countryward are declining, due as much to the miniature supply as to lack of buyers. Prices were slightly irregular last week, but are still extremely close to fat cattle values. Better chances to buy can be expected in another month or two and many operators are disposed to wait. Gains in weight on grass in the next month, although it is a good gaining month, may but little more than offset the probable loss in price.

June Break Hits Hog Market.

The June break in the hog market arrived pronto, but the average price at Chicago holds well above $10 and dips below that figure should be brief unless the country is more full of hogs than is generally believed. In the normal year receipts reach the crest of the June run by the third week in the month, so that it is too early to conclude that bottom prices have been struck. Whatever the loss, it is almost sure to be put on again in July and August, when receipts drop to the lowest level of the year.

Demand for Wheat Improves.

With prices the lowest in five months and the disturbing influence of May contracts removed, the demand for wheat shows some improvement.

Subtracting re-deliveries, about 10,000,000 bushels were delivered during May, which is practically the largest quantity ever known. Although the effort to enhance values met defeat, the situation ended with the bulk of the cash wheat at Chicago in the hands of a few strong interests. About 3,000,000 bushels have already been sold to exporters and millers. Since old grain can be bought at about the same price as the new crop deliveries, millers have a great incentive to buy, although the prospect of a big crop this year is preventing any tendency to stock up for future milling needs.

Generous Wheat Crop Estimated.

Unofficial crop reports indicate a yield of about 605,000,000 bushels of winter wheat and 250,000,000 bushels of spring wheat, or a total of 855,000,000 bushels, compared with 795,000,000 bushels harvested last year. Condition of the winter wheat crop improved but little in the last month. The acreage of spring wheat has been reduced about 7 per cent, but the crop is starting off well. The Canadian crop is in good shape in most sections with the acreage but little changed from last year.

Wet weather has made a lot of wheat liable to rust and numerous claims of damage are being made, especially in the Ohio Valley, Kansas, Oklahoma and Texas. Harvest in the last state has already started and an increasing acreage is passing the danger point each week.

Corn Acreage Slightly Reduced.

Corn acreage will be slightly less than last year, according to comprehensive private reports. Owing to wet weather some planting is still to be done and the outcome is still in doubt. The after-planting run of corn is on without an equivalent broadening in the demand. Prices are slightly lower, but the loss has been small.

Lame Start for Oats Crop.

The oats acreage shows a decrease of about 7 per cent, according to unofficial returns. The condition of the crop is lowest at this season in a number of years, with the period of greatest deterioration still to be met. The crop is estimated at about 1,250,000,000 bushels, compared with 1,060,000,000 bushels harvested last year.

The range of cash grain prices follows:

Kansas City—Wheat: No. 2 hard, $1.17@1.53; No. 3, $1.16@1.55.

Corn—No. 2 mixed, 55@57c; No. 2 yellow, 57½@58c; No. 2 white, 56@57c.

Oats—No. 3 white, 37½@38c.

Easy Tone in Hay Market.

A large part of the receipts of hay are of poor quality and are not wanted. Prices on the best grades are slightly easy, but the demand is practfcally equal to the supply.

Kansas City—Prairie upland No. 1, $12@13.50; No. 2, $10@11.50; alfalfa, choice, $24@25.50; No. 1, $22@23.50; standard, $18.50@21.50; No. 2, $14.50@18; No. 1 timothy, $19.50@20.50; No. 2, $14.50@17; No. 1 light clover mixed, $19@20; No. 1 clover mixed $16.50@18.50; straw, $9@10.

Egg Receipts Declining.

Receipts of eggs are declining, although they are relatively above the average for this time of the year and the surplus for storage is large. Storage operators are anxious to buy all of the northern eggs arriving, but are neglecting southern stock. Prices, although slightly lower, have changed but little for a number of weeks. The June 1 storage report is expected to make a new record for that date.

Denver—Eggs, 27c. Live poultry—Hens, 19@22c; springs, 35c; broilers, 35c; roosters, 7c; turkeys, 27c.

Butter Storing Starts in Earnest.

Although storage of butter in a small way has been going on for two weeks previously, large scale operations did not begin until the first of June and storage holdings are considerably less than at this time a year ago.

Prices for 92-score fresh butter on June 3 were: Chicago, 35c; New York, 36c; Boston, 36½c; Philadelphia, 36½c.

New Potatoes Take Lead.

Weekly shipments of new potatoes now exceed the movement of old stock, although the latter is abundant for this season of the year. The market is rather weak with the demand only fair. Northern sacked round whites are quoted at $1.25 to $1.30 f. o. b. shipping points.

Never before could you get so much tire worth for $10.90

CAR-OWNERS who bought a 30 x 3½ "Usco" for $10.90 last Fall have discovered this by now—

Nobody before ever got so much tire value in the neighborhood of ten dollars.

They never had to question the *quality*—with the makers of U.S. Royal Cords behind it.

They couldn't help admiring the price—*spontaneously made* to meet the *new economy times.*

* * *

Today a number of other 30 x 3½ tires have come into the popular $10.90 price range originally established by "Usco."

So it might be well to remember just what the "Usco" Tire is in case you are in the habit of *comparing.*

In "Usco" you get *responsible quality.*

$10.90 is *today's* price. But the *quality* was fixed *long ago*—the same "Usco" performance tire users have been *buying* and *using* and *buying again* for years. A tire that would be *high value* at more than $10.90.

At $10.90 it is *unapproached.*

United States Tires are Good Tires

Copyright 1922 U.S. Tire Co.

Feeders Learning to Finish Calves for Market.

(Continued from Page 3.)

beef cows should be used and they should be good milkers, not of refined dairy type, but able to feed the calves well and keep them fat until weaning time.

Good Shelter and Care Necessary.

Ample shelter should be provided in feeding calves and the use of bedding in such quantities as will keep the cattle clean and comfortable will pay. Clean, bright-coated animals always sell at an advantage. Baby beeves should weigh from 400 to 600 pounds when going on full feed. When finished they should weigh from 700 to 1,000 pounds. The markets for this type of cattle have ranged as high as $8.50 a hundred in Denver the past few weeks.

In finishing "little" cattle, remember that they must be "fat" to bring the additional price which is necessary to make this kind of feeding profitable

Dairying and Hog Raising

All letters regarding commercial and technical features of dairy farming and hog production promptly answered. Address all communications to Dairy Department, Western Farm Life, Denver, Colorado.

Do Not Overfeed Calf.

If you are inexperienced in raising calves on skim milk remember to guard against overfeeding. This is a mistake often made and is the most common cause of scouring and the other digestive troubles occurring in raising calves on separated milk. The calf does not need more milk because the butterfat has been removed. Assuming that this is necessary is an error too often made.

Skim milk is unbalanced in its nutrients. It contains an excess of protein and of course is short on fat. Feeding more does not overcome this shortage of fat. The lack of fat can only be met by getting the calf to eating some starchy grains, such as oats, corn, or kafir, as soon as possible. When properly digested, the starch can be substituted in the animal body for fat to a considerable extent. There is no provision in the digestive system of a calf, however, to handle starch until it is three or four weeks old. This is the reason it is necessary to feed the calf whole milk for three or four weeks, or until it begins to eat and digest a little grain.

The skim milk calf fed from a bucket gulps its milk so rapidly that its appetite is only half satisfied, even though it has taken all it can properly digest. A good rule to follow in feeding calves is always to keep them a little hungry. If the calf does not show a strong appetite for more there is something wrong with it or too much milk has been given.

The average calf at the age of two or three weeks, when it can be gradually started on skim milk, should not as a rule be given more than three or four quarts at a time, and at no time in the feeding of a skim milk calf is it necessary to feed more than a gallon at one feeding. If there is plenty of milk, large thrifty calves may be fed up to five quarts at a feeding until they are three months old.

In feeding skim milk to calves they should always be fed separately. The practice sometimes followed of letting two or more calves drink from one bucket or a trough into which the milk has been poured is almost certain to lead to trouble.

It is of the greatest importance to get the skim milk calf to eating grain as early as possible, since the grain is necessary to make up for the fat removed by the separator. Usually they will begin to show a little appetite for grain by the time they are a month old. This can be encouraged by sprinkling a little grain in the bottoms of the buckets after they have cleaned up the milk.

At the first indication of indigestion, which is usually shown by a strong odor in the feces, the amount of milk should be cut down to a third of the normal amount for two or three feedings. It helps matters somewhat to give three ounces of castor oil in the milk to a calf showing the first signs of indigestion. Digestive troubles are far more easily prevented than cured, and one who would succeed in raising skim milk calves must watch closely for the first slight symptoms of trouble and apply the necessary preventative measures.

Learning to raise dairy calves successfully is one of the necessary lessons of dairying. The dairyman who fails in raising calves cannot keep up his producing herd. Upon no one thing perhaps can a man's continued success in dairying be better gauged than upon his ability to raise his heifer calves and develop them into thrifty, vigorous, young cows.

Scrub Boar Means Scrub Pigs.

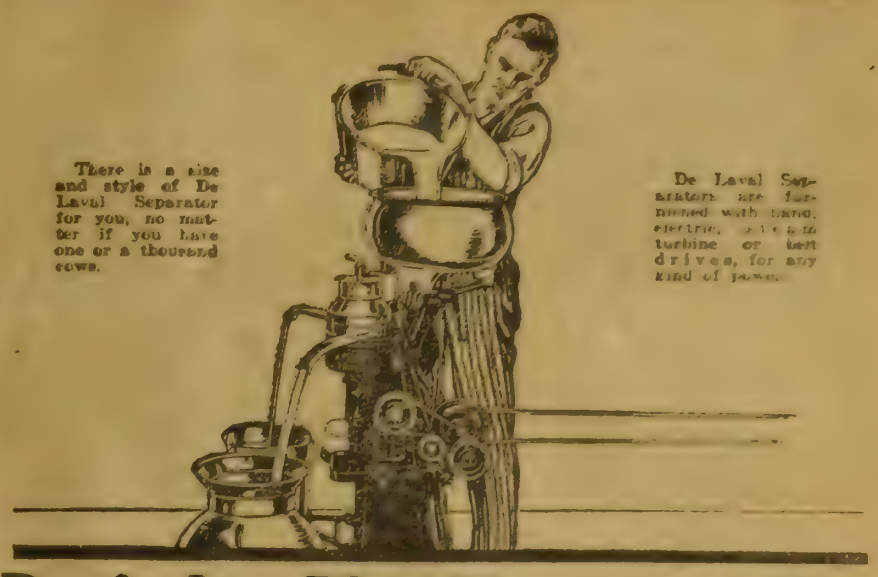
One bad cross with a poor sire will ruin the breeding stock for a long time. The process of breeding down is much more rapid than the process of breeding up. The startling results of crossing an inferior sire on brood sows of good type was a feature of the swine feeders' day at the Iowa State college. Professor Evvard had some breeding experiments under way relating to the types of hogs used for feeding. A real wild boar, a shaggy animal weighing less than 150 pounds, long of nose and carrying most of his weight on the front quarters, was trotted out before the 300 spectators. It was difficult to trace any relationship between this primitive animal and our modern types of hogs.

The next exhibit was a litter of pigs produced by crossing this wild boar on a Poland China sow. The one cross had removed all the distinctive characteristics of the modern type of hog. The four pigs were small, scrawny, wild in appearance, with sloping backs and crooked pasterns. They had been fed a standard ration of shelled corn, tankage, salt and alfalfa meal, but had grown to less than 100 pounds of weight in six months. Modern type pigs equally well fed would have weighed 175 to 200 pounds at the same age. The lesson was a striking one for it emphasized the principle in breeding that if we desire good animals for feeding, we must use sires of good type and pure inbreeding in order to be sure they will transmit their own good qualities to their offspring. "All we have to do is to use poor boars for one generation," said Professor Evvard, "and we have lost all the good points we have spent generations in building up."

Milk and Carrots for Paralysis.

Paralysis in hogs in very common, according to the veterinary department of Colorado Agricultural college. It is presumed to be a deficiency disease; that is, something needed for nutrition is not present in the food. In answering a question from a farmer recently the veterinary department stated that the substance in this particular case that was probably lacking was vitamine B. A recommendation was made to try a ration consisting of plenty of milk and carrots. Results under experimental work with this ration in cases of pig paralysis have been remarkable.

Plow up the places where grasshoppers have laid eggs. That is one of the safest methods to prevent their ravages



There is a size and style of De Laval Separator for you, no matter if you have one or a thousand cows.

De Laval Separators are furnished with hand, electric, steam turbine or belt drives, for any kind of power.

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"Last week we replaced a machine made by ..... which had been used only five years. Our customer, Mr. Crawford Cook, living near Foyil, Oklahoma, shipped one can of cream from ..... and then one from the De Laval, and changed about in this manner for four weeks, the result being that the De Laval got him exactly two pounds more butter-fat per day, and he is milking 12 cows. This amount at 35c per pound makes 70c per day, or $255.50 per year, more than twice as much as the new De Laval was worth. Mr. Cook said we could use his name and this information, and if they didn't believe it, he would make an affidavit to that effect."

This was taken from a letter from one of our agents, but there is nothing unusual about it. We are constantly receiving letters of a similar character from people who say they waited too long before buying a De Laval.

On hundreds of thousands of farms today there is an enormous amount of butter-fat being wasted by inferior or worn-out separators and by hand skimming. Perhaps such waste is going on right on your farm. Stop it at once by getting a new De Laval. It is not only the world's best cream saver, but lasts longer and is easier to clean and turn than any other.

Call up your De Laval Agent today and ask him to bring out a new De Laval so that you can try it, or write us for full information. Sold on such easy terms that it will pay for itself while you are using it.

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Of economy of farm operations with tools that stand the strain. Delay from poor tools adds to costs—Freshen up your equipment NOW with our

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We want you to give A. & C. calf meal a fair trial. WE KNOW it will raise better calves for one-third what your milk sells for. TO PROVE IT TO YOU we want you to order 100 pounds. Any time within thirty days if you are not convinced that it will do everything we claim, we will return your money.

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N.B.—Old Style Powder and Pill Vaccines still made for those who prefer them.

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MORE than an ordinary "grease". This standard product is a careful mixture of a clean grease and real powdered mica, itself a remarkable lubricant.

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each week of S. C. White and Brown Leghorns at $10 per 100 from our selected stock. Sure to please.

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at 3 months old at $5.00 each—the real Ringlets. Get some of these and improve your flock.

Order direct from this ad., as the hatching season will soon be over.

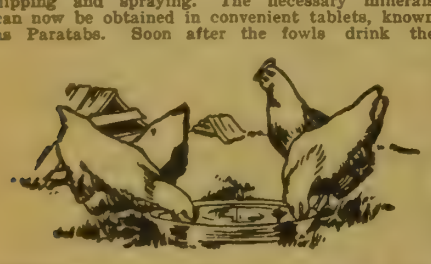
DeKoster's Hatchery,

Box W. F. L. **Zeeland, Mich.**

Mineralized Water Routs Chicken Lice

Tablets Dropped Into Drinking Founts Banish Vermin, Make Fowls Grow Faster and Increase Egg Yield.

Any poultry raiser can easily rid his flock of lice and mites, make chickens grow faster and increase their egg yield by simply adding minerals to the fowls' drinking water. This does away with all bother, such as dusting, greasing, dipping and spraying. The necessary minerals can now be obtained in convenient tablets, known as Paratabs. Soon after the fowls drink the



mineralized water, all lice and mites leave them. The tablets also act as a tonic conditioner. The health of the fowls quickly improves, they grow faster and the egg yield frequently is doubled. Little chicks that drink freely of the water never will be bothered by mites or lice.

The method is especially recommended for raisers of purebred stock, as there is no risk of soiling the plumage. The tablets are warranted to impart no flavor or odor to the eggs and meat. This remarkable conditioner, egg tonic and lice remedy costs only a trifle and is sold under an absolute guarantee. The tablets are scientifically prepared, perfectly safe, and dissolve readily in water.

Any reader of this paper may try them without risk. The laboratories producing Paratabs are so confident of good results that to introduce them to every poultry raiser they offer two big $1 packages for only $1. Send no money, just your name and address—a card will do—to the Paratab Laboratories, Dept. 895, 1100 Coca Cola Building, Kansas City, Mo., and the two $1 packages, enough for 100 gallons of water, will be mailed. Pay the postman $1 and postage on deliverey, and if you are not delighted with results in 10 days—if your chickens are not healthier, laying more eggs and entirely free from lice and mites—your money will be promptly refunded. Don't hesitate to accept this trial offer as you are fully protected by this guarantee. —Advt.

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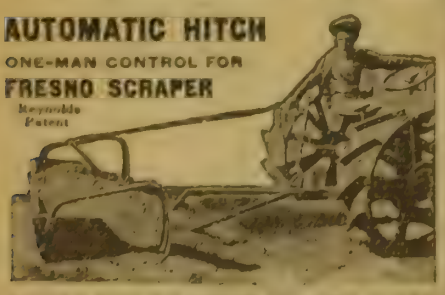

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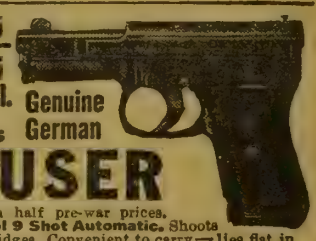

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Serious Outbreak of Roup.

My chickens' eyes swell until they are almost closed. They droop around three or four days, then die. The trouble seems to be contagious. Most of the ones I have lost were laying hens.—Mrs. N. G., Idaho.

The symptoms point very strongly to a rather serious outbreak of roup, which is more easily prevented than cured. This disease is quite contagious and if the sick fowls are permitted to eat and drink with the others, the disease will spread very quickly throughout the flock.

All sick fowls should be isolated at once, putting them in a clean, well sheltered pen and feeding them on soft mash and milk. As a rule, it hardly pays to waste much effort in trying to cure fowls which are seriously affected. The treatment usually recommended is to carefully cleanse the eyes and mouth with warm, salty water, using a soft cloth, or bit of absorbent cotton. After this is done, wash the eyes and mouth and affected parts in a solution made by dissolving two heaping teaspoonfuls of boracic acid, or a small half teaspoonful of permanganate of potash, in a pint of water. Some dip the fowl's head in a vessel containing this solution two or three times a day. Injecting into the nostrils with a medicine dropper hydrogen peroxide diluted with two parts of water is often beneficial. After treating with these remedies, it is a good plan to grease the head with camphorated oil, or carbolated vaseline. It is very commonly advised to put a small quantity of permanganate of potash in the drinking water, just enough to give it a bright red color. Severe cases are seldom, if ever, permanently cured and usually the best thing to do is to kill these cases at once and endeavor to keep the disease from spreading through the whole flock.

In the way of preventive measures, keep the house clean, well ventilated and thoroughly disinfected. See that it is tight enough in the roof and back side to prevent drafts. Do not crowd the fowls and do everything that is possible to increase their vigor and vitality.—G. C. W.

Profitable Farm Poultry

W. E. VAPLON.

Questions about the farm flock promptly answered by letter. Free advice on all phases of poultry production. Address all inquiries to Poultry Department, Western Farm Life, Denver, Colorado.

If hens have intestinal worms and head lice, and have to use roosts that harbor thousands of red mites in every crack and hole and joint, they cannot, and will not, lay per expectations. Give them a fair and decent chance.

Poultry manure analyzes high in nitrogen, the most expensive of the plant foods to buy as fertilizer, but this element escapes easily by fermentation. To prevent this loss add a small amount of superphosphate to the manure, which will also reinforce it in phosphorous. Never add ashes to poultry manure, as they hasten fermentation which results in the loss of nitrogen as ammonia.

Simply from a production and market standpoint it seldom pays to keep hens over the second year. Pullets which have made an exceptionally good record in their pullet year should furnish the breeding stock for the next year, however. It may even pay to keep some of the best through their third year, although they may not lay a very large number of eggs. Few farm poultry producers pay much attention to breeding pens. It would be worth while to give some attention to this matter of breeding stock, for the pullets hatched out will inherit to a lesser or greater extent the qualities of their mothers. A flock in which the hens have demonstrated their qualities as layers is far more likely to transmit good laying capacity than a flock gathered up promiscuously when the time comes to save eggs for hatching.

Treating White Diarrhea.

We are having a great deal of trouble with white diarrhea in our baby chicks. Is there anything we can do to prevent the trouble?—W. D. B., Otero county, Colo.

This disease is now known to be caused by a specific organism. The eggs are infected with the germs so that the chick develops the disease as soon as it is hatched. There are of course unsanitary conditions such as spoiled feed, dirty water, improperly ventilated incubators, or brooders, and badly regulated heat, which are factors in reducing the vitality of the chicks and thus favoring the ravages of the disease. Some specific forms of treatment have been worked out and we are carrying at the present time advertisements of remedies in Western Farm Life. Of course, the best remedy of all is prevention and this implies using eggs for hatching known to come from absolutely healthy stock.—G. C. W.

Raise Production Standard.

Some hens in a flock will lay not more than fifteen eggs a year, while others in the same flock may lay 250 or more. It has been estimated that a hen must lay eighty-eight eggs in a year to pay for her keep. The hens of Colorado average but ninety eggs a year. It is evident that a good many low producers are being carried along by the high producers. There is probably one poor hen to every two good ones; a star boarder to every three hens. Of the 1,500,000 hens in the state at least 500,000 would be classed as culls.

It costs $2 a year to feed a hen if all the feed had to be charged. Of course, every farm flock gathers up grain and other feed which would otherwise be wasted, but whether they are charged for all their feed or not the cull hens are a drag and the poultry production would be greater without them, besides the money they would bring on the market. It will pay to cull and the needed information on how to proceed to pick out the producers from the drones can be obtained and easily put into practice.

Fowls May Have Tuberculosis.

Last summer I lost nearly all of my flock of Rhode Island Reds. They began to drop off every day as high as eight in a day. Only the young turkeys died, but it took the old and young chickens alike. They would mope around ten days sometimes before they died. Some would seem as healthy as ever and within two hours after they were turned out, were found dead. Some started back dragging themselves around as though their backs were hurt and were as light as feathers and couldn't get them to eat a bite. They then had light green droppings and some seemed to have diarrhea, others did not. I examined some of the sick fowls but couldn't find anything wrong with them. All winter long every chicken or turkey I killed had an enlarged heart covered with nodules. Some of the hearts hung in a bag of water. What is the trouble and what can I do to prevent it? Would there be any danger of keeping the three hens left?—Mrs. G. S., Kiowa county, Colo.

The only way to be sure about the disease affecting your chickens, is to send one of the live ones, that has the disease, to the Colorado Agricultural college, at Fort Collins, or you might remove the viscera from one that has just died, place powdered borax around it, and ship in a tight box.

The fact that both old and young are affected, that they live for ten days after being visibly affected, and have nodules on the heart, makes it appear much like tuberculosis. We have seen whole flocks exterminated by tuberculosis within the last year.

The diarrhea, with greenish droppings, would rather indicate cholera. In case one of the remaining hens manifests the disease ship her to us at once and the chances are that we will be able to give you definite information that will be of value to all of us.—G. H. G.

Keeping Records on Poultry.

In twelve counties of Colorado cooperative records are to be kept by the Colorado Agricultural college this year on the profits from the poultry. It is planned to have six farms in each county where this work will be done. Each demonstrator will keep definite cost accounts on the flock. Approved methods of culling, feeding and housing will be followed. These records will be kept under the direction of the county agents in the several counties.

The poultry industry in Colorado has not kept pace with the rapidly increasing population. Last year the poultry products consumed represented a value of $12,000,000, while but $7,000,000 worth was produced within the state. The state certainly should produce enough poultry and poultry products to supply home demand.

MISCELLANEOUS.

(Classified Advertising.)

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GUARANTEED BETTER BUTTER WRAPPERS—100, 60c; 250, $1.50; 500, $2.50; 1,000, $4.25, printed to order. Home Specialty Co., Middleton, Idaho.

COLLECTIONS, ACCOUNTS, NOTES, CLAIMS collected everywhere on commission; no collection, no pay. Allen Mercantile Service, 260 Lathrop Bldg., Kansas City, Mo.

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LET US TAN YOUR HIDE—COW AND HORSE hides for fur coats and robes. Cow and steer hides into harness or sole leather. Catalog on request. We repair and remodel worn furs; estimates furnished. The Crosby Frisian Fur Co., Rochester, N. Y.

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SALVAGE AND SURPLUS SALE OF ARMY goods. Post Army Store, 921 18th St., Denver, Colo. Write for price list.

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KODAK FINISHING.

KODAK FINISHING—FOR TRIAL ORDER SEND 25c any size roll six prints. Kase Studio, Neville Block, Omaha, Neb.

FILMS DEVELOPED 5c, PRINTS 2c, POST cards 3c; prize photo free. J. B. Christopherson, Box 1961, Salt Lake City, Utah.

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NEW LOW PRICES — SEASON 1922

MILLER BABY CHICKS Art. Bred for HEAVY EGG PRODUCTION

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Advertisements will be inserted in this department for 7c per word; four or more consecutive insertions, 5c a word each insertion. Remittances can be made by postoffice money order or personal check. Every figure and initial counts as one word. Guaranteed circulation 55,000 copies each issue. Send us a trial advertisement. Write for proof showing how these columns pay advertisers.

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S. C. WHITE AND BROWN LEGHORN EGGS, $3.75 per 100, postpaid. Baby chicks, 11c. Jenkins Poultry Farm, Jewell, Kan.

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RHODE ISLAND REDS.

GOOD QUALITY RHODE ISLAND RED AND White Wyandotte chicks, $13 per 100. Clarence Warren, Mankato, Kan.

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PLYMOUTH ROCKS.

BARRED PLYMOUTH ROCK EGGS FOR HATCHing after June 15; sell eggs from breeding pens at half price, $1.50 for 15; $2.50 for 30; from flock 5c each, any number. Chester Blunt, Route 1, Greeley, Colo.

WYANDOTTES.

WHITE WYANDOTTE EGGS, KEELER STRAIN, $1 per setting of 13 eggs. C. Eklund, Mustang, Colo.

MINORCAS.

LARGE TYPE PURE SINGLE-COMB BLACK Minorca winners. Eggs, $6 per 100; chicks, 16c. Herbert Rhodes, Clifton, Kan.

FINE SINGLE COMB BLACK MINORCAS—FINE Buff Orpingtons. Fertile eggs, 10 varieties. Baby chicks. Frank A. Agnew, Southside, Omaha, Neb.

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PUREBRED CHICKS, 8c UP; LEADING VARIETIES; postpaid; live delivery guaranteed. Catalog free. Lindstrom Hatchery, Clinton, Mo.

CHICKS, 8c UP; ALL VARIETIES; POSTPAID; guaranteed; prompt shipment. Illustrated chick guide free. Superior Hatcheries, Windsor, Mo.

NINETY BREEDS—POULTRY, EGGS, PIGEONS, dogs, baby chicks, parrots, ferrets, hares. Complete free folder. Bergey's Poultry Farm, Telford, Pa.

CHICKS—WHITE LEGHORNS, 10c; BARRED and White Rocks, 11c; postpaid and 100 per cent live delivery. Younkin's Hatchery, Wakefield, Kan.

S. C. WHITE LEGHORN HATCHING EGGS, $3.75 per 100. Baby chicks, $15.50 per hundred. Spanish eggs, $1.50 per setting. Oliver Poultry Farm, Marnel, Colo.

SUPERIOR QUALITY BABY CHICKS, S. C. White Leghorns, 13c; S. C. Reds, 15c. Write for circular. Belleview Poultry Ranch, 244 W. Belleview, Box W, Littleton, Colo.

HATCHING EGGS HALF PRICE; SEND FOR free circular; 30 varieties of popular and ornamental poultry, the best in the west. Modlin's Poultry Farm, Rt. 28, Topeka, Kan.

CHAMPNEY'S QUALITY BABY CHICKS—ALL leading varieties at popular prices; can ship with no delay; guarantee live delivery. Champney's Poultry Yards, 2057 S. Broadway, Denver.

COLUMBIA HATCHERY, P. O. BOX 1102, DENver, Colo. We can supply you with any quantity of baby chicks. Capacity 10,000 weekly; 17 varieties; live delivery guaranteed; parcel post prepaid. Write for prices and full particulars.

IF IT WEARS FEATHERS WE HAVE IT OR will get it for you. Spangled Hamburgs. March hatch Barred Rock and White Wyandotte pullets. Extra choice lot cockerels priced right. Champney's Poultry Yards, 2057 S. Broadway, Denver.

QUALITY CHICKS—WHITE AND BROWN LEGhorns, $10 per 100. Reds, Rocks and Anconas, $12. White and Buff Wyandottes, $13. Left-overs, $9.50. Live delivery; postpaid. Fleda Jenkins, Jewell, Kan.

BABY CHICKS—PUREBRED; ALL LEADING varieties from tested heavy laying strains; prepaid; 100% live delivery anywhere. Satisfied customers in 30 states. Satisfaction guaranteed. Send for illustrated catalog. Loup Valley Hatchery, Box 140, Cushing, Neb.

BABY CHICKS—SEND AT ONCE FOR PRICES of purebred chicks from Hogan tested flocks. We have all leading breeds hatching each week and can fill orders on short notice. Live delivery guaranteed and shipping charges prepaid. Prices are lower and quality better. Denver Baby Chick Co., 2436 W. 43d ave., Denver, Colo. Phone Gallup 1702.

GET NEW POULTRY BLOOD NOW—SAVE $3 to $8 on each Cockerel. The best and cheapest way to introduce new blood is to buy young, early-maturing, vigorous cockerels. Our excellent 12-weeks-old cockerels—White Leghorns, S. C. and R. C. Rhode Island Reds, and White Wyandottes—with utility and fancy qualities combined are offered to you now at from $2 to $3. No culls—return the birds and get refund in full if not satisfied. Fort Collins Poultry Farm, Mr. and Mrs. Paul C. Jamison, Owners, 308 Smith St., Fort Collins, Colo.

DUCKS.

PRIZE-WINNING BUFF ORPINGTON DUCKS—Eggs, $1.50 for 12. Crescent Valley Farm, Humboldt, Kan.

TURKEYS.

DIRECTIONS ON HOW TO RAISE TURKEYS, make them lay 50 eggs or more. Curing blackhead and what causes it, ridding them of lice, all for $1. Sunnydale Poultry Farm, Keystone, Neb.

LIVE STOCK

CATTLE.

REGISTERED SHORTHORN MILK COWS FOR sale. Reasonable prices. The Lowell Purebred Cattle Co., Union Stock Yards, Denver.

WHY PAY MORE? PUREBRED REGISTERED Holstein heifer calves, $50. Circulars free. Coudersport Holstein Farms, West Chester, Ohio.

AYRSHIRES — LONG-LIVED MILKERS? YES. One of my cows, eleven years old, gave over 16,000 pounds of milk since July 1 and last month gave over 1,300 pounds, official test. The only Federal Accredited herd in Colorado. Established in 1907. Some fine bull calves priced very low. Price will double on next crop. Dr. F. S. Schoenleber, Stockyards, Denver, Colo.

HOGS.

ORION CHERRY KING 15TH BOARS OUT OF Defender sows will put extra dollars in your hog lot. The price is right. J. O. D. Ranch, Aroya, Colo.

FOR SALE—THREE PUREBRED DUROC JERsey males and five gilts, ready to breed; large type; moderate price on all. Julius Engelbrecht, Boone, Colo.

THE CHEAPEST AND BEST WAY TO GET INto the purebred hog business is to buy young stock from a reputable breeder; weanling pigs of the famous Edgemoor herd of Durocs, $10 to $25 each. W. H. Marshall, Rt. 3, Littleton, Colo.

WE OFFER NOW REAL SPRING BOARS AND gilts by our herd boar, J. O. D. Stilts, a son of Stilts, one of the best Duroc Jersey boars living. These are out of Orion Cherry King and Pathfinder sows. The price and quality is right. Money back if not satisfied. J. O. D. Ranch, Aroya, Colo.

MILCH GOATS.

SWISS MILCH GOATS, HIGH-GRADE STOCK; milking from three to five quarts; also young stock. Frank Rauchfuss, R. D., Edgewater, Colo.

SCHOOLS OF AUCTIONEERING.

LEARN AUCTIONEERING—MAKE BIG MONEY. School opens soon. Write Col. Compton, 4195 Xavier, Denver, Colo.

HELP WANTED

MEN—WOMEN—GIRLS. GET U. S. GOVERNment life jobs. Steady work. Commence $92 to $135 month. Quick, sure raise. Paid vacation. Pleasant work. Short hours. Common education sufficient. Pull unnecessary. Write immediately for free list positions. Franklin Institute, Dept. E 123, Rochester, N. Y.

SEEDS

ALFALFA SEED, 95% PURE, $6 BUSHEL, sacks free, track Concordia. Geo. Bowman, Concordia, Kan.

YELLOW SWEET CLOVER SEED, 99% PURE, $6 per hundred; 7c in small lots. Chas. Mahl, Grower, Monte Vista, Colo.

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FIR LUMBER, MILLWORK, RED CEDAR SHINgles, fence posts, from mills to you. Send bill for delivered prices. Lansdown, Box 909M, Everett, Wash.

RED CEDAR SPLIT POSTS DIRECT FROM shipper; prices low; let us name delivered prices. Send lumber bill for estimate. Stock guaranteed. Kirk Company, Tacoma, Wash.

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DO YOU WANT CHEAP PASTURE LAND IN Mexico, bordering on the Rio Grande River? If so, write W. H. Graham, Cuero, Texas.

I WANT FARMS AND LAND FOR CASH BUYers; will deal with owners only. R. A. McNown, 334 Wilkinson Bldg., Omaha, Neb.

WANTED—TO HEAR FROM OWNER OF GOOD ranch for sale. State cash price, full particulars. D. F. Bush, Minneapolis, Minn.

FOR SALE—160 ACRES FINE LAND NEAR Casa Grande, Ariz., $45 per acre. Half cash, half trade. J. A. Strough, Route A, Alamosa, Colo.

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SELL YOUR PROPERTY QUICKLY FOR CASH, no matter where located. Particulars free. Real Estate Salesman Co., Dept. 11, Lincoln, Neb.

MONEY TO LOAN ON IMPROVED FARMS ON ten and twenty year plans, in Colorado, Western Nebraska and Southern Wyoming. Reed & Patten, 210 Interstate Trust Bldg., Denver, Colo.

I HAVE CASH BUYERS FOR SALEABLE FARMS—Will deal with owners only. Give description and cash price. Morris M. Perkins, Columbia, Mo.

$750 SECURES EQUIPPED FARM WITH 38 acres growing crops. Only mile to town; 40 acres; good orchard, comfortable cottage, porch, pleasant view, barn, wagon shed; mules, cows, poultry, implements, 38 acres corn, potatoes, peas, fruit, garden truck, etc., included; to close, all $1,500, only $750 down. Details page 106 Illus. Catalog, 1,200 Bargains, Free. Strout Farm Agency, 831 BA, New York Life Bldg., Kansas City, Mo.

DO YOU WANT A HOME IN A RICH VALLEY near Spokane, on three trans-continental railroads? Where soil is good, rainfall ample, summers cool, winters moderate. The kind of stump land that pays to clear, where a farmer with $1,500 can hope to succeed. Timothy and clover green eight months in year; natural dairy country; land cheap; ten yearly payments at 6 per cent. Humbird Lumber Company, Box D, Sandpoint, Idaho.

GARDEN TRACTS.

PLATTEVILLE, COLO., OFFERS WONDERFUL opportunities to those in the market for farms or garden tracts; 720 acres subdivided into tracts of from 5 acres up, will build improvements to suit purchaser's needs; one-fourth cash, balance in installments. Platteville is on a growing highway, 36 miles north of Denver; fine productive soil, number of sugar, pickling and canning factories in vicinity contract your products; excellent water rights; $200 to $300 per acre. The Globe Investment Company, 1658 Broadway, Denver, Colo., or G. B. Clark, Branch Office, Platteville, Colo.

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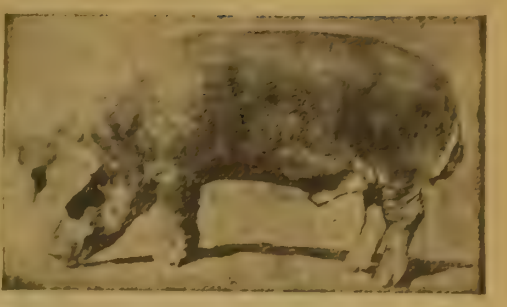
ARTIFICIAL EYES FITTED AT HOME. BOOKlet free. Denver Optic, 570 Barclay, Denver, Colo.

INVENTIONS WANTED—CASH OR ROYALTY for ideas. Adam Fisher Mfg. Co., Dept. 204, St. Louis, Mo.

BLUE RIBBON HERD

DUROCS

Buy them young and grow them yourself. Weaned pigs, regular price $25 to $30 ea., specialty for short time on good farmers' boars, weaners, $15 and $20. Show prospects, weaners, $30. Are breeding sows for fall farrow. Can sell you one or a car load. Our Blue Ribbon herd won the Junior winner at Denver. Write today.



The Blue Ribbon Live Stock Co.
C. F. Burke, Mgr. PUEBLO, COLO.

HAMPSHIRE HOGS

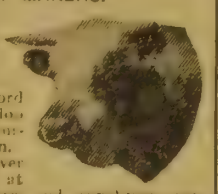
We make a specialty of furnishing foundation herds. We have Show and Herd Boar prospects for sale, that combine the blood of the greatest show hogs ever produced. LOOKOUTS, WICKWARES and TIPTONS, the three greatest strains known to the breed. For free booklet, prices and description write to

N. E. Mosher & Son, Hugo, Colo.

MILKING SHORTHORNS.

Shorthorns That Milk

ARE MONEY MAKERS.



A herd that will give you a good monthly cash income is what you will need in the future. One of our young bulls from a Record of Merit cow can develop your herd into a dual-purpose paying proposition.

We know the war is over and have bulls for sale at prices that you farmers and ranchmen can afford to buy. Write for our bargain list and easy payment plan.

We also have several young bulls for sale, priced to sell.

THE PINE VALLEY DAIRY & FARMS CO.
Seeley G. Rose, Mgr. Colorado Springs, Colo.

Bates Shorthorns

are the foundation blood of true Milking Shorthorns. We have them. A few bulls for sale.

THE CARPENTER CATTLE CO.
GREELEY, COLORADO

Buy MILKING SHORTHORNS

from the oldest established herd in the state. We can supply your needs in bulls of beef type either horned or polled Shorthorns. Write Superintendent for folder on breeding and prices.

State Industrial School,
Golden, Colo.

MILKING SHORTHORNS

All Cows in Milk Officially Tested.
Service bulls of World's Record breeding. Both males and females for sale. Personal inspection invited. Send for Illustrated Booklet.

THE BONVUE FARMS CO.,
Stockyards, Denver, Colo.

HOLSTEINS.

Send for Illustrated Pamphlet

Showing pictures of the cows and herd-sire that have won for our herd the distinction of being Colorado's largest prize money winners in the National Holstein-Friesian prize list for this year, and among the first eight prize winners for milk and butter production in the world. There's a reason—let us show you why. Young Bulls for sale from this World-Record Blood.

Mrs. R. G. Douglas
Sanborn Meadows,
RUSH, COLORADO.

We have bred hundreds of prize-winning and high-producing Holstein cows, including

Tilly Alcartra

We can supply you with that same line of breeding. Write

McKAY BROS., Caddoa, Colo.

PRODUCTION

TYPE

We offer you a wonderful amount of these Holstein qualities—and from a clean herd. Bull calves from fine record dams. Pahgre Valley Ranch, Loesch Bros., Montrose, Colo.

SIZE

BREEDING

Buy a Calf Out of This Herd

Twenty cows in this herd on an official seven-day test averaged 446.13 lbs. of milk and 20.19 lbs. of butter.

COLORADO STATE HOME,
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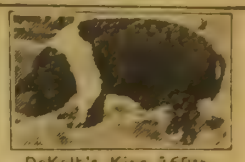
PUREBRED

Hampshires

by Grand Champion sires and dams. Breeding stock for sale.



DeKalb's King 160th.

C. S. BRATT & SON, ARAPAHOE, NEB.

POLAND CHINAS.

Mather's Big-Type Polands

sold to breeders in four states this year are giving satisfaction.

BUY WEANLING PIGS
at prices that will surprise you.

C. J. Mather, Longmont, Colo.

SPRING BOARS

Just a few real herd headers still ready to go at pre-war prices. Used with grade sows even, they will more than pay for themselves on the first crop of pigs. Write today.

C. C. Boyd, Yuma, Colo.
Livestock Auctioneer and Duroc Breeder.

DUROCS.

BRAUER PUREBRED DUROC CO.

Colorado Springs, Colo.

We'll have a wonderful lot of spring pigs, especially boars, from the great hogs Woodford Sensation, Highland King Defender, Colorado Chief Sensation, Golden Chief and other high-class boars. Satisfaction guaranteed.

J. W. BRAUER, Gen. Mgr.
Colorado Springs, Colo.

Range View Stock Farm

Breeders of Purebred DUROC JERSEY HOGS. "Quality our Standard." We offer spring gilts and boars sired by Great Orion Sensation, and also by his outstanding son, Great Orion Sensation Again. Price reasonable. Satisfaction guaranteed.

Henderson, Colo., R. R. 1, Box 49.
Phone Hazeltine 35.

GREAT BARGAINS, 960 HEAD HEREFORDS, SHORTHORNS, ABERDEEN ANGUS

1, 2, 3, 4 and 5 years old. Cows, heifers and bulls. Prices $75 to $120 and up. 360 Percheron and Belgian horses, stallions, mares and colts, 1 to 6 years old. Prices $125 and up per head. One head or a carlot. Breeding guarantees with each. Registered pedigrees by mail. Stock on twenty farms in Iowa and Illinois. Write for circular and particulars. Address ILLINOIS HORSE & CATTLE CO., Good Block, Des Moines, Iowa.

SHORTHORNS.

SHADELAND STOCK FARM

BREEDERS OF

SHORTHORN CATTLE

Herd headed by Maxwalton Rustler, a grandson of Avondale.

Chester White hogs of best breeding stock for sale. Also Ringlet Barred Rock eggs for hatching. G. W. BALL & SONS, Pierce, Colo.

C. A. C. QUALITY STOCK.

In picking your Shorthorn breeding stock remember

SNOW KING

breeding has proved itself in the show ring. Lord Douglas calves out of Snow King cows are even better. We will have some head of this breeding for sale this summer.

COLORADO AGRICULTURAL COLLEGE.
Fort Collins, Colorado.

HEREFORDS.

D. S. Polled Herefords

Cows from Dale's Plato, [illegible] POLLED SUCCESS [illegible] heifers for sale.

Smith Livestock Co.
CHIVINGTON, COLO.

Power Farming A Time-Saver on Irrigated Land

Irrigation farming becomes a much simpler process with the fast-running Fordson used for the important soil preparation jobs

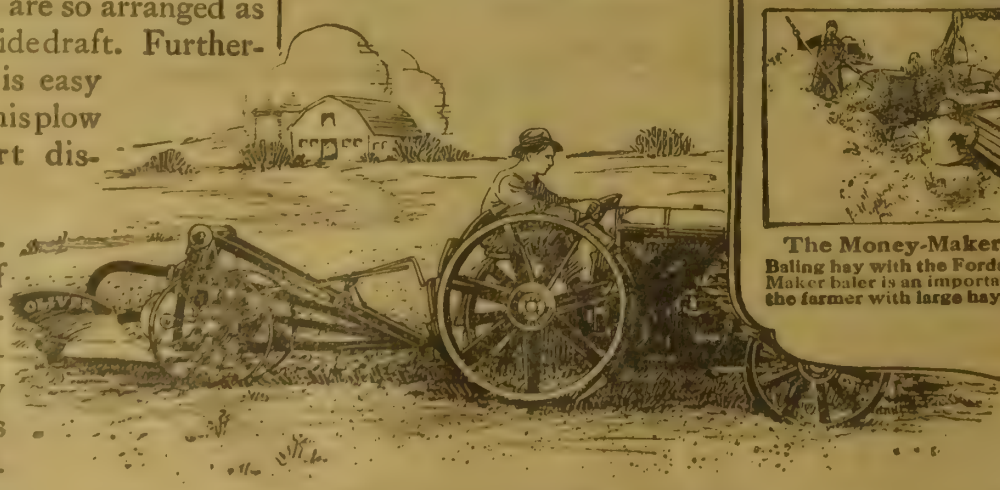
BECAUSE of the additional field operations necessary in irrigation, the extra speed of the Fordson has brought about a new era in tilling artificially watered farms. The plowing, the leveling, the ditching are all accomplished in much less time. With the work made so much easier, there is now less danger that part of it will be slighted. When the water is turned on, the Fordson farmer's land is ready to produce its utmost.

Thorough and fast work in plowing is done by Fordson and the Oliver Two-Way Sulky Plow. Both bottoms turn the furrow slice the same and leave a neat level field. The bottoms are so designed as to thoroughly pulverize even baked soils. Built especially for use with the Fordson, the beams and the hitch are so arranged as to avoid side draft. Furthermore, it is easy to back this plow for short distances.

The operation of this Oliver Two-Way Plow is simple. The driver touches one rod back of him to trip the power lift that raises the bottom out of the ground. After turning at the end, he touches another rod and the other bottom is dropped for the next furrow. Both bottoms are so mounted that they "take hold" at once and enter the ground promptly—thus an even headland is common with this plow.

The depth of the furrow is quickly changed without stopping or slowing down. A crank screw for this adjustment is conveniently placed near the tractor seat. The wheels are so placed that both of them run on unplowed ground. Thus the bottoms are always held perfectly level.

Sixty-five years of experience in building plows and many scientific experiments are responsible for the correct design found in the mouldboards on this plow. Made especially to work in the kind of soils that are found in irrigated sections, the mouldboards scour well, pulverize the soil thoroughly, and avoid excessive draft.



The Oliver Two-Way Sulky Plow

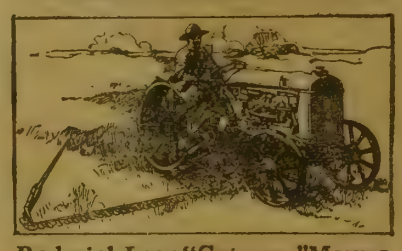
The extra speed possible with the Fordson and this special Oliver Two-Way Plow makes a much shorter job of the tillage work. The extra strength secured by using heat-treated steel beams and the perfect draft lines that avoid side draft, insure the work being done so well that more productive seed beds are the result.

The World Famous Oliver No. 7
On thousands of farms, the world famous Oliver No. 7 has been the plowing partner of the Fordson from the beginning.

Fordson Disc Plowing
Oliver Fordson special disc plows have set a new standard. They penetrate the toughest soils, yet are light running.

Oliver Single Bottom Sulky
For deep mouldboard plowing in trashy conditions with the Fordson. Similar in construction to world famous No. 7 gang.

Roderick Lean Automatic Harrow
Fitting the Seed Bed the Fordson way with the Roderick Lean Automatic Tractor Disc—a special Fordson Harrow.

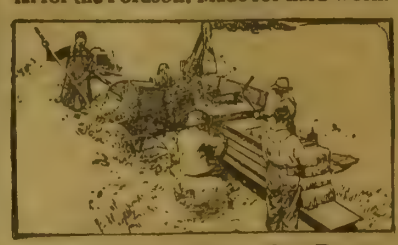


Roderick Lean "Cutmore" Mower
Attaches without changes to the Fordson. Power taken direct from drive worm. Makes a one-man outfit with Fordson.

The Amsco Tractor Drill
Tractor speed and accuracy utilized by the Fordson owner with the Amsco special drill. Force feed makes positive planting.

The Amsco Two-Row Cultivator
Cultivating corn is easy for the Fordson farmer with the Amsco Cultivator—special for the Fordson. Made for hard work.

Money-Maker Ensilage Cutter
Fordson silo filling with the Money-Maker done quickly and cheaply. Strength and scientific design give perfect work.



The Money-Maker Hay Press
Baling hay with the Fordson and Money Maker baler is an important operation to the farmer with large hay acreage.

Wood Bros. Individual Thresher
The Wood Individual Humming Bird Thresher and Fordson make short work of threshing. All grain is saved.

Ford Dealers Everywhere Sell Standard Fordson Equipment

Increase in Hog Production May Mean Lower Prices Next Fall--Page 5

WESTERN Farm Life

UNIVERSITY OF ILLINOIS
JUL 1 3 1922

Vol. XXIV. *Denver, Colorado, July 1, 1922.* *Semi-Monthly*

Grange Against Anti-Vivisection Bill.

Following a debate on the proposed anti-vivisection measure, held in the auditorium of the Wheatridge High school, a straw vote showed those present were unanimously opposed to the passage of the bill. This debate was held under the auspices of the Darden Pomona Grange. Representatives of most of the eighteen granges of Jefferson county were present, which made a good-sized audience.

The Anti-Vivisection Society was represented by Frank T. Bright and Dr. H. T. Young, a chiropractor. These men presented arguments in favor of the proposed bill. They read extracts from the circular sent out by the society, which showed cases of extreme cruelty having been practiced on animals and which they claim would be prevented if the anti-vivisection bill became a law.

The medical association was represented by Doctors C. T. Burnett and Sewall. They presented argument in opposition to the proposed bill. They claim that much of the progress made by the medical profession was due to animal experimentations and among the illustrations given were the development and use of antitoxin and vaccine treatments for diphtheria, rabies, smallpox and typhoid, and antitoxin for hog cholera and blackleg in cattle. These illustrations were cited as showing what had been discovered by animal experimentations.

The proposed bill would not only prevent vivisection on animals either with or without anesthetic, but would prohibit all animal experimentations without which there would never be any further medical discoveries of the character of those cited. If such a law had been encouraged in the past there would not have been any antitoxin discoveries made, said the opponents of the bill.

The representatives of the medical association made the claim that the arguments and literature used by the supporters of the bill were mostly taken from experimentations made before anesthetics were discovered and that very few operations are made an animals at this time without an anesthetic.

Do Harvest Tinkering Early.

Now is the time to drag the old harvester canvasses out of the granary for repairs, before the wheat is waiting to be cut. The canvasses probably have a few deceased slats and some pieces of baling wire serving as straps and buckles.

The binder deserves some attention, particularly if it has stood outside all winter, and should be hauled from its weedy bower early. It has a few inches of dust and mud on the platform. The oil holes need cleaning and filling. It may need new parts. Repairs will be scarce in about three weeks. The knotter may be too rusty to work and need a good dose of kerosene. Baling wire may be taking the place of several bolts.

It would be a good idea to remove the hens' nests from various places in the combine harvester. Starting the engine —after it will start—may save many costly hours at the beginning of harvest.

A little work on the harvest machinery now may save several hundred dollars' worth of grain from going down or shattering out during harvest. And it will help prevent the annual rush on harvester repairs, with the consequent delays while the repairs are being shipped.

High Lights on Horse Situation.

There was the same number of horses in the United States in 1920 as in 1910, and a million more mules. On account of automobiles, tractors and trucks, we do not need as much work stock as we did ten years ago. We have too many horses; therefore they are cheap. On the other hand, the decrease in colts born in the last year or two indicates a probable shortage of horses within five or six years.

Sudan grass will furnish abundant midsummer pasture for hogs.

Look for

LOWEST COST

in the next tire you buy

You do not want the kind of low cost that eventually becomes high cost. You do not want the cheap tire that proves in the long run to be an expensive as well as annoying experiment.

The real low cost tire is one that sells at a reasonable price and then rolls off mile after mile of uninterrupted service—the tire that renders easy, comfortable riding, low operating costs and greatest mileage.

The Savage Cord is built from the inside out to give long wear and faithful service, to resist hard usage and rough roads, and to save you money—even in gas, oil and repairs to your car. We realize this is a broad statement and we do not ask you to believe it without proof. Compare the construction of our tire with others, *see the seventeen constructional features we have put into it*—then you will appreciate our claims are true.

You can buy tires that cost less to begin with, but Savage Cords pay you better by costing less in the end.

Other good makes of tires may use one or more of the seventeen constructional features we have incorporated into the Savage Cord but no other tire that we know of begins to embody them all.

WE GUARANTEE

that not an ounce of shoddy or adulterants is used in the building of the

SAVAGE CORD

THE SPRECKELS "SAVAGE" TIRE CO. SAN DIEGO, CALIFORNIA.

OUR BEST ASSET IS THE SATISFIED CUSTOMER

Western Farm Life

A Western Magazine for Western Farmers and Stockmen

VOL. XXIV. DENVER, COLORADO, JULY 1, 1922. No. 13.

Shorthorn Breeders Hold Annual Sociability Tour

INSPECTION OF DIVIDE HERDS SHOWS MUCH IMPROVEMENT BEING MADE

By George C. Wheeler.

SHORTHORN cattle have practically a monopoly on the stock farms and ranches of the Kiowa valley of Elbert county, Colorado. No experienced stockman could visit this section without recognizing at a glance its adaptability to livestock farming and the production of high-class registered beef cattle. "Not even in eastern Nebraska or other old Shorthorn sections could so many purebred Shorthorn cattle be found in a given area as in this Elbert county community," said H. C. McKelvie of Nebraska Farmer, who was one of the outside visitors at the annual Sociability Tour of the Elbert County Shorthorn Breeders' Association, June 21. Others who for the first time saw this valley and visited the herds on the schedule were agreed that a better locality could not have been selected to dedicate to the breeding and development of Shorthorn cattle. In the valley good hay, forage, and grain crops are successfully grown to provide feed for the winter months. Every farm is equipped with a silo and good barns. Back from the valley on either side stretch good grazing land interspersed with groves of pines which provide shelter and shade for the cattle winter and summer.

Sunnyside Robert, chief herd bull on Gleason & Blazer ranch.

This sociability run is based on the theory that it is a good thing to get acquainted with your neighbor and see how he is doing things. It is an affair for the whole family and ends with a community picnic in one of the pine groves of the community.

Start from Gleason & Blazer Ranch.

The start was made from the Sunnyside ranch of Gleason & Blazer near Kiowa, where the early arrivals spent the time waiting for the crowd to gather in carefully inspecting the well-bred cattle found on this farm. Some of the best breeding cows from the leading herds of the Middle West have been added to this herd as well as bulls suitable for heading a breeding herd of such quality. Sunnyside Robert, the chief herd bull, is still siring calves of outstanding merit and is held in high esteem by the owners because of the uniformly good results they have been getting from his use over a period of years. They recently purchased from one of the best Iowa herds a young bull which is being used to assist the chief herd bull. Another two-year-old bull, Sunnyside Cock Robin by Sunnyside Robert, attracted much favorable comment from the visiting breeders. The uniformity and high quality of the young calves gave evidence of the good breeding methods being followed on the Gleason & Blazer farm.

Some forty cars had gathered by the time the schedule called for the start to the Allan Carnahan breeding farm, which is about a mile and a half up the creek. Mr. Carnahan has succeeded in maintaining the interest of his sons in livestock farming and all are interested in producing good Shorthorn cattle. A Saunders bred bull, Superbus Cumberland, heads the Carnahan herd, assisted by a young Cumberland bred bull purchased from the same breeder at the National Western Livestock Show last winter.

A demonstration showing how easily a good cow can become the foundation animal of a whole herd of high-class cattle attracted much attention at the Carnahan ranch. Eight animals, seven females and a bull calf, all the descendants of one cow, were shown in one pen. This cow is of Better Goods breeding and is only six years old. She was purchased from the herd of Sam Ball at Wray, Colo. All her calves but the last have been heifers. The gathering together in one group of these animals showing such quality and uniformity was a most impressive lesson to the beginner who might think it is a long road to getting a good herd of purebred cattle established.

Jones Has New Herd Bull.

All too soon County Agent Aicher, who tried to keep the trip going on schedule, announced that the time had come to start for the farms of Ralph and Paul Jones, a mile or two farther up the valley. Paul Jones continues to keep Baron Hedgewood by Parkdale Baron at the head of his herd and is well pleased with the results he is getting. He has recently purchased another bull, however, Type's Model 12th, a Saunders bred bull of good type and quality. Ralph Jones is now using a two-year-old bull by Golden Type in his herd. This young bull has an excellent pedigree and is of massive type and well selected to give good results on the kind of cows in the breeding herd.

Leaving the Jones farms the party passed through Elbert, noting just north of the town the sales pavilion put up by the Elbert County Shorthorn Breeders' Association for sale purposes and community entertainment meetings. This is the first association sales pavilion in Colorado and is a valuable asset to a community breed organization. The next objective of the trip was the famous Forest Glen Ranch of A. G. Cornforth and his son, Harvey. Here were gathered in the yards an unusually good lot of breeding cows and heifers for the inspection of the visitors. This was one of the most picturesque ranches visited and is admirably equipped to handle purebred beef cattle. The new herd bull on this place is Augusta's Marshall, a bull purchased from the Tomson herd in Kansas. He is considered by many good judges to be one of the best Shorthorn bulls in Colorado. The quality and uniformity of the calves this new bull is siring indicate that he will be a worthy successor of Cedar Lawn's Best, the herd bull long used on this ranch.

Good Calves Sired by Melburn Herd Bull.

Charles Melburn's farm was the next on the list. Mr. Melburn is one of the younger breeders, but has already established one of the best Shorthorn herds to be found in the Elbert community. Most of the cow herd were in pasture too far away to be visited. Typical Thought is the chief herd bull in the Melburn herd and is generally considered one of the good Shorthorn bulls of the state. The kind of calves a bull sires is the true test of his value as a breeder, and the calves by this bull were greatly admired by the visitors. Another good bull being used on some of the cows is Divide Sportsman, also by the Allen bull Second Thought. This young sire is a very promising animal. Mr. Melburn had the honor of having both the top bull and the top female in the recent sale of the Elbert County Shorthorn Breeders' Association.

The last place visited was that of George Gleffe near the picnic grounds, where the party gathered for the noon hour and the program which followed the dinner. After parking the cars in the grove the visitors went to the yards and inspected the Gleffe herd, which is headed by Collynie Dale, a grandson of Avondale. This bull is a good individual and is proving a good breeder. In this herd as in the others visited is being seen the good results following the use of good bulls of outstanding Shorthorn beef type. Those familiar with the breeding developments in the herds of the community commented on the improvement being made in all the herds visited. The will and desire to bring about improvement carried out in a co-operative manner as is being done in the divide country of Elbert county means much to the livestock development of all the farms of the whole region. On every farm visited there were good buildings and other improvements. These things are invariably associated with livestock improvement. There is something uplifting about working with good purebred livestock. The man who systematically strives to improve his livestock unconsciously finds himself aspiring to better things along other lines. This tendency is noticeable on the farms and ranches visited on this Sociability Tour of the Shorthorn breeders of Elbert county.

Only a few of the herds of the members of this Shorthorn association could be visited on this trip. Much regret was expressed that a visit could not be made to every one of the thirty or more breeders in its membership. Visiting a few of the herds, however, gave a good idea of what the community as a whole is doing in making this one of the leading Shorthorn sections of the country.

Tour Closed With Picnic Dinner.

Visiting breeding herds and admiring the cattle was only a part of this tour. It was called a sociability tour and the women and young folks were along, and during the picnic period no one could doubt that promoting greater sociability among the folks of the community was an important function of the trip. Those in charge had provided an ample supply of well iced lemonade and ice cream to go with the lunches. Groups ranging from half a dozen to twenty or more gathered under the pines in the grove and proceeded to dispose of the good things the women of the party had provided.

Following the picnic dinner, A. G. Cornforth gathered those present together in a big circle seated on the ground and on automobile cushions and proceeded to call out for short talks various victims which he had on his list. The first was H. W. Hailey, who had just begun his work as field representative for the American Shorthorn Breeders' Association. Mr. Hailey counted himself fortunate in being able to meet this group of enthusiastic Shorthorn boosters at the very beginning of his new work which, he stated, would consist of doing all in his power to further the replacement of scrub and inferior stock with good Shorthorns. W. N. Fulton of the Record-Stockman commented on the improvement made in the cattle since his last visit.

Mr. Cornforth, who introduced the speakers in a most happy manner, announced (Turn to Page 12)

Sales pavilion erected by Elbert County Shorthorn Breeders' Association at Elbert. Only one of its kind in Colorado.

Farm Bureau Proves Worth in Dollars and Cents

BIG SAVINGS SHOWN BY COMPARING ORGANIZED AND UNORGANIZED COUNTIES

George A. Montgomery.

FARMERS in a new farm bureau state want to know if it pays to maintain the organization and employ a county agent. By advocating the use of higher yielding varieties, helping farmers to co-operate in controlling insect pests and giving instructions in the best time and methods for preparing the seed bed, county agent work added 10,000,000 bushels of wheat to the Kansas production on the harvested acreage last year, according to figures worked out by Karl Knaus, state county agent leader, and A. F. Turner assistant county agent leader at Manhattan. The figures are based on reports of the Kansas State Board of Agriculture.

Figuring this wheat at only $1 a bushel—a conservative figure—the extra return to farmers of the state was $10,000,000. Farm bureau work last year in all Kansas counties cost only $225,348.73. Of this amount, $118,139.83 was raised by taxation, and $107,208.90 from membership dues. If this had been the only work done by the farm bureaus the return on the investment would have been 443.7 per cent. But that is not all the bureaus did.

Abandoned Wheat Acreage Reduced.

The abandoned wheat acreage was reduced in farm bureau counties from 2 per cent to 66 per cent per county. When it is considered that 11,906,582 acres of wheat were abandoned in the state during the four years 1915, 1916, 1917 and 1918, one will have an idea of what this saving means. The seed alone for this acreage was worth between $15,000,000 and $20,000,000, while the labor of preparing the seed bed and sowing was far in excess of that amount. This means that the loss per year from abandoned acreage was in the neighborhood of $10,000,000 and $15,000,000 for seed and labor of planting.

The reduction in abandoned acreage was accomplished by campaigns setting forth the time for sowing to avoid losses from Hessian fly, education as to the proper time of plowing, depth of plowing and time and method of seeding, as well as the preparation of fields to prevent soil blowing which has destroyed millions of acres of wheat in Kansas.

Hog Cholera Under Control.

Hog cholera, which has cost Kansas millions of dollars, is practically under control in the farm bureau counties of the state. As soon as an outbreak of cholera is reported the county agent is on the job to organize a community, get non-immunized herds vaccinated, and prevent the carrying of the disease.

The average farm bureau tax paid by farmers in the state would not quite pay for a hair cut, wouldn't pay the cost of driving a motor car more than five miles, would pay only one-fourth of a single dog-tax, would buy only one pound of butter, or three cigars.

Organization Increases Wheat Yields.

A comparison of the wheat yields in two adjoining counties—Republic and Cloud—will show what the farm bureau work has been doing in increasing wheat yields. For the years 1899-1902, the average yield for Republic county was 15.6 bushels per acre. The yield for Cloud county for the same period was 15.2 bushels, just .4 of a bushel to the acre less than that of Republic. Comparison of the yield after Cloud county had organized a bureau shows that it has made a gain on Republic of 1.4 bushels per acre. Republic's acreage for the years 1917-1920 was 11.2 bushels per acre, while that of Cloud was 12.2 bushels. This increase was due largely to the fact that the county farm bureau in Cloud has been putting on an educational campaign ever since it was organized to get farmers to grow Kanred wheat, which yields, on an average, from 1 to 3 bushels per acre more than other varieties in that section of the state. Thousands of acres of Kanred are being grown each year in Cloud as a result of this campaign. In Republic county only a few farmers have raised Kanred, due to the fact there was no agitation to get them to sow seed of this variety. The Cloud county bureau has also done much to get farmers to practice the best methods of preparing the soil and to get them to sow at the right time, while there has been no organized campaign to accomplish this in Republic county.

Cloud county had 110,000 acres of wheat in 1920 and, therefore, must have raised 154,000 bushels more than she would have raised had no county agent work been established. Estimating the value of this wheat at only $1 per bushel (some of it was sold for more than twice that much), the Cloud county bureau was worth more than $150,000 to the farmers of the county for the one year.

Making a similar comparison for four unorganized counties in a group—Riley, Pottawatomie, Geary and Wabaunsee—with four organized counties, one bordering the group on each side—Clay, Marshall, Jackson and Morris—will show a gain of 2.1 bushels for the farm bureau counties, since their organization. The increase per county for the organized counties is 162,500 bushels per year, on the same acreage, at practically the same cost per acre.

Similar studies of the unorganized counties Decatur, Thomas, Sherman and Sheridan, and Cheyenne and Rawlins, bordering farm bureau counties, show an average of 1.8 bushels per acre for the farm bureau counties over the unorganized counties since county agent work was begun in Cheyenne and Rawlins. On the acreage harvested in these two counties last year, this gives Cheyenne and Rawlins 553,000 bushels more of wheat per year. This indicates that the farm bureau has been worth more than $250,000 a year to each of these two counties in the increased production of wheat alone. The last group of counties considered are in the western part of the state, a section where grasshoppers have done millions of dollars' worth of damage in a single year. In one year Ford county is said to have lost $2,000,000 worth of wheat because grasshoppers just before harvest cut the wheat stalks off about six inches below the head. The damage in Meade county for the same year was estimated at $1,000,000.

Grasshopper Pest Under Control.

Farmers in organized counties in this section of the state no longer worry about the grasshopper as a pest. When the hoppers start to make their first inroads, organized campaigns are started by the farm bureaus and poisoned bran mash is put out in all places where the hoppers are doing damage. In a single year 115 tons of white arsenic have been used in the western counties of the state to destroy hoppers. To mix this poison, 4,600,000 pounds of bran were used.

A comparison of these same counties, Cheyenne and Rawlins—farm bureau counties, with Decatur, Thomas, Sherman and Sheridan, unorganized counties which border, shows that a great saving has been made by cutting down the acreage of wheat abandoned each year. From 1911 to 1917, 33.4 per cent of all wheat sown in Cheyenne and Rawlins was abandoned. From 1918 to 1921, after farm bureaus had been organized in those counties, only 9.9 per cent of the acreage has been abandoned. This is a decrease of 70.4 per cent.

The average acreage abandoned in the unorganized counties from 1911 to 1917 was 48.4 per cent. While the percentage not harvested in 1918 to 1921 was 22.8 per cent, a decrease of 57.3 per cent. This shows that the decrease in the organized counties was 13.1 per cent more than in the unorganized counties. At this rate 3,760 acres less were abandoned in 1921 in the two counties than would have been abandoned had the rate of decrease been the same as in the unorganized counties. This means that for the two counties the saving of seed and of labor in preparing soil and sowing probably was in the neighborhood of $10,000,000.

Farm Bureau Reduces Cholera Loss.

An idea of the saving by controlling hog cholera in farm bureau counties is shown by comparing the neighboring counties, Saline, which is unorganized, with McPherson, which has a county agent. In 1920 the loss in Saline county was 9.72 per cent, while the loss in McPherson for the same period was only 1.79 per cent. If the percentage of loss had been the same as in McPherson county, Saline would have saved $25,768.06 worth of hogs which died in 1919, and $12,412.67 worth in 1920, basing the estimates on the number of hogs reported in the two counties during these two years by the State Board of Agriculture.

Riley and Geary counties, without agents, during the years 1919-1920 had a cholera loss of 2.65 per cent, while farm bureau counties on each side of these two—Marshall and Morris—had a loss of only .56 per cent. If Riley and Geary counties could have reduced their losses to the same percentage as those in Marshall and Morris counties they would have saved $25,568.79 worth of hogs which died during the two years.

Big Saving From Poultry Culling.

In addition to this work, county agents held 2,326 poultry culling demonstrations with an attendance of 27,856. A total of 316,525 hens were handled, of which 82,849 were discarded as unprofitable. In addition, 697 other poultry meetings were held with an attendance of 10,353. Figuring the cost of feeding a hen at 75 cents a year, the culling project saved farmers $53,000 on the poultry handled by agents alone, to say nothing of that culled by the owners who saw demonstrations.

County bureaus aided in organizing 47 breeders' associations with 1,307 members. Through these associations and farm bureaus 58 association sales were held at which 2,978 head of purebred livestock were sold. Through the efforts of the county agents 490 purebred herds were started and 479 purebred sires replaced scrubs.

Big Returns From Club Work.

A total of 366 boys' and girls' clubs with 3,597 members were organized during the last year. The educational value of the club work is the primary object, but the work showed a profit of nearly 50 per cent. Products valued at $50,594.54 were produced at a cost of $34,047.94, giving a profit of $16,546.60.

Insect control methods were demonstrated and carried out on 53,950 farms, nearly one-third of all in the state.

The idea that the county agent is a fresh, young college lad sent out to tell farmers how to run their farms has passed. Farmers have come to realize that he is a technical adviser whose business it is to get for them information they do not have time to get for themselves. With his varied range of services, the agent is earning for himself the right to be known as consulting engineer to the largest single industry in America.

Arsenate of lead powder dusted on cucumber and melon plants will stop the ravages of the striped and spotted cucumber beetles.

How We Are Winning in Moffat County

A LITTLE PROFIT FROM EACH OF MANY LINES IS MAKING US A LIVING.

J. F. Vell.

OUR 480-acre homestead in Moffat county is making us a living and we are developing it into a profitable ranch. One must figure close, for the growing season is short. As we generally have late springs we do our plowing in the fall and as soon as the frost is out of the ground in the spring we disk the soil and give it a good harrowing. Just before planting we harrow again to kill all the weeds that have started. We sow oats and spring wheat from the middle of April to the middle of May, and plant potatoes, squash, beets and turnips from May 1 to May 20. These crops all do well here.

Corn is planted in three-foot rows with two-row planters, quite deep, as our soil is sandy loam. As soon as the corn commences to come through the ground, it is harrowed and disk-harrowed once a week until it is about a foot tall. Then one may use a one-horse tooth harrow, or cultivator, and go through it about once every two weeks. We cultivate whether it is weedy or not. The corn is thinned by hand with a hoe to two feet apart in the rows. You can raise more corn on one acre by this method, than many do on five acres.

Root Crops Do Well.

Beets and turnips are sowed in rows eighteen inches apart and thinned to from six to eight inches apart in the row and cultivated the same as corn. They grow to a very large size and are very crisp and tender. Potatoes do extra well here. They quite often make 150 bushels an acre and even more. The ground is worked for potatoes about the same as for corn until planting time, which is about the first of May.

My squash did the best of any crop I have raised. The ground was worked the same as for corn and I harrowed it at intervals of once a week as long as I could get through the vines. The Silby Banana and Golden Hubbard do the best. I have a large storage cave in which I store the beets, turnips, potatoes, and squash, for fall and winter use. We do all the work ourselves, so the crop doesn't cost us any ready cash for help. At harvesting time the crop is sorted and graded. The best of it is loaded and taken to different towns and sold direct to the consumers at a fair profit and a reasonable price.

Cattle do well here on the open range during the summer. In the early fall they are taken up and the ones that are to be fattened for beef are placed in a large, clean pen, and are fed alfalfa hay and some beets. Turnips are given them besides the beets. When the root crops are fed up, I commence to feed the squash and a little corn. The hogs are put in the same pen with the cattle and the way they go after the squash isn't slow. Only a little corn is required with the squash and roots to fatten cattle and hogs at small expense.

If the market price does not suit us, the cattle are slaughtered one by one and sold direct to the consumer. Hogs are generally butchered and the meat cured and smoked and then sold at a good price, although less than the packing house product brings.

The potatoes are kept for winter use with some of the squash.

We find a good registered brood sow is a good investment. She will thrive and keep in good shape all winter on a daily ration of one-half dozen spuds, a squash, two ears of corn, a small bunch of alfalfa and a gallon of milk.

Milking a Few Cows Pays.

A red Shorthorn bossie will give you plenty of butter to defray your grocery bill on a couple of squash and a forkful of alfalfa a day. I milked six cows last winter. We sold the cream until the price came down to 13 cents a pound for butter fat and then made cheese. It was good quality and made about double what cream was bringing. I always keep my cow pen clean.

We have a nice flock of poultry, mostly Langshans, with a few Rhode Island Reds. A ranch isn't complete without a nice flock of well bred poultry. I have a few sheep also. They live on almost nothing and clean up what the cows would waste.

In the fall my ground is in good shape for fall wheat and it does as well as if the ground had been summer fallowed. I have been breaking twenty acres of sage-brush ground each spring and putting it into cane and corn, which does well in new ground. I drag and harrow the ground and then go over it two or three times with a hay-rake. This leaves the ground almost free of brush.

Editor's Note—This is one of the special articles on the subject, "How I Am Making Money Out of My Farm."

Utah Jersey Breeders Hold Annual Show at Provo

COMMUNITY BECOMES LEADING CENTER FOR BREED IN INTERMOUNTAIN STATES

Walter H. Olin.

FOR many years "Dairy Day" has been observed in June at Provo, Utah. The purpose of this event has been to stimulate interest in good dairy stock. Provo has become one of the most outstanding centers for breeding good Jersey cattle in the whole intermountain region.

Last June the first annual Utah Jersey Show was held at Provo. It was such a success it was decided to make it a permanent affair. Saturday, June 10, was Utah Jersey Day this year. More than 150 purebred Jersey cattle were on exhibition. The American Jersey Cattle club sent their field agent, Frank B. Astroth, from New York City, to place the awards and to address those in attendance as their special representative. Mr. Astroth found such a deep interest in Jersey Cattle that he spent a whole week in Utah.

There was a grand parade of the cattle on exhibition in the forenoon. In that parade was an aged cow that attracted particular attention. This cow, Eagle Iren, was a 24-year-old purebred Jersey, owned by the State Mental Hospital. She has to her credit twenty-one living calves and has an average annual production of 400 pounds of butterfat for her entire producing life period.

Near the head of the parade marched Ogima's Golden Lad, a fine Jersey bull owned by L. M. Price, that later took grand championship honors over bulls of any age.

The ring that attracted the most attention and awakened the greatest admiration was the cows four years old and over. When these cows were lined up for Judge Astroth to make the awards, he remarked after going over the twenty-four animals carefully: "I doubt very much if there were at the National Dairy Show at St. Paul last fall twenty-four Jersey cows in the aged class that would surpass the cows you have here in this exhibit in production of butterfat." This was indeed a very fine tribute.

The Utah County Cow Testing association has just finished its first year's record. Wm. R. Hill, the official cow tester, gives the following as the records of the four best cows of the more than 200 under test:

Merry Maiden's Betty, a purebred Jersey, 647.2 pounds butterfat from 10,712 pounds milk.

Utah Aggie, a purebred Holstein, 636.5 pounds butterfat from 18,554 pounds milk.

Antoinette's Fern, a purebred Jersey, 610.6 pounds butterfat from 11,625 pounds milk.

Countess, a purebred Holstein, 594.2 pounds butterfat from 18,305 pounds milk.

These are records for all dairy breeds in the county. Two cows of high rank were in the Jersey exhibit as leaders of the breed.

W. A. Nuttal's herd of purebred Jerseys lead the cow testing association for the year, with a herd average of 453.8 pounds butterfat per cow from 7,863.8 pounds milk average.

The Jersey classes of aged bulls, young bulls and bull calves, and heifers as well as aged cows, previously spoken of, revealed that some careful breeding is being carried on in this important Jersey center.

A. O. Smoot, chairman of the day, told the writer that the yearly sales of herd foundation stock in Utah county to outside territory now averages $15,000 to $20,000 per year. The whole intermountain region is coming to realize that the Provo district is the place where good acclimated Jersey blood can now be obtained in car lots.

"We have reached the place in the dairy industry where we are not ashamed to let our Jersey sires and dams go to any place in the nation with the brand of Provo upon them," said Mayor O. K. Hansen. Says J. T. Farrer, cashier of the Provo Commercial and Savings Bank: "We feel justified in giving financial backing to the dairy industry in this district, for a payroll is started on every farm where dairying is practiced. The old dairy cow always pays her way out if she be given anything like a fair chance."

A. A. Hinckley, commissioner of agriculture for Utah, in the after-dinner talks following the Jersey Day banquet at Hotel Roberts, stated that the farmers of all Utah are greatly indebted to the farmers of this district for the example they have set by gathering around them dairy herds of purebred stock. He affirmed it as his belief that the dairy returns from cows of Utah county were double those of the cows of most of the other counties of the state and that if all dairy farmers of the state of Utah would improve their dairy herds by using such blood as was shown, without any increase in the present number of dairy cows, they would increase the revenue from the dairy business six million dollars a year.

Among others who spoke at the Jersey dinner were President Frank S. Harris of Brigham Young University; Prof. Jno. T. Caine III; Prof. W. E. Carroll, both of Utah Agricultural college; Hon. Jno. A. Israelson from Capitol building, Salt Lake, president of Utah State Dairy Show; F. B. Astroth of New York City, Mayor Hansen and others. Prof. Geo. B. Caine, head of dairy department, Utah Agricultural college, Prof. J. C. Hogensen from the State Extension Service, and Uncle Ben Eldridge were present and assisted in the success of the day.

Already plans are under way to make Utah Jersey Day 1923 the "very best ever." These Provo breeders are determined to place Utah Jerseys second to none in the breed anywhere. They say "Keep your eye on Provo."

Plain Mary—record cow of Jersey breed with year's production of 1,040 pounds of butterfat to her credit.

Market Outlook for Farm and Ranch Products

LARGE INCREASE IN HOG PRODUCTION MAY MEAN LOWER PRICES NEXT FALL

Edited by Glenn G. Hayes.

THE survey of the spring pig crop by the Department of Agriculture on May 1 has been made public and shows a net increase in the number of pigs saved in eleven cornbelt states of 14.5 per cent over last year. The number of litters farrowed was 22.8 per cent larger than in the spring of 1921, but reports of heavy losses were confirmed as the average number of pigs saved per litter was 7 per cent less than a year ago.

Besides the increase in the spring pig crop the prospective increase in fall farrowing in the cornbelt averages 49.3 per cent. If the fall farrowings work out as expected, the total number of sows to farrow for the entire year will be 28 per cent greater than in 1921.

The department points out that the increase in hog production will offset the shortage in meat stocks and lard in storage as compared with the average of the last five years. In two of those years, however, stocks of these products were a burden upon the hog market and it is not desirable, if good hog prices are to be maintained, that stocks be built up again to this average.

This report indicates that hog prices may go considerably lower next fall and winter than during the last few months, and they may average below the level of last fall and winter. Whether hog prices will maintain a profitable ratio compared with corn depends largely on the size of this year's corn crop.

Choice Cattle Higher, Others Lower.

The cattle trade is becoming a two-sided affair with choice kinds advancing and common and medium grades, most of which show signs of grass, taking the opposite course. Top steers at Chicago have ascended to $9.75 and the general average price of good steers is the highest in fifteen months, with a further advance almost a certainty. A falling market on lower grades of all sizes and sexes is even more assured. Their loss last week ranged from 10 to 50 cents.

The supply of grass cattle is in doubt. Earlier estimates upon the movement to Kansas and Oklahoma pastures indicated a marked decrease below last year, but shipments of stocker and feeder cattle into those states from the twelve leading markets during April and May totaled approximately 140,000 head, compared with 90,000 last year and 107,000 head two years ago.

The official estimate upon the Arizona crop of grass beef was large, but private observations in the northern range states point to a moderate decrease there.

Feeder Shipments Fall Off.

Total shipments of stockers and feeders from the twelve leading markets have decreased 50 per cent in the last few weeks, although the potential demand if prices were lower undoubtedly is broad. Kansas City reported a decline of 50 cents on some grades last week, and further revisions in the price scale can be expected, although no bargain counter is probable at any time this year. On western markets breeding cows and heifers are said to be so scarce that quotations are merely nominal.

Another Rally in Hog Market.

The hog market dipped again early last week under receipts which were practically the heaviest of the June run, but rallied with the same promptitude that has followed each minor decline recently. Although eastern shippers took only a small quota, large packers bought freely on the break, revealing that they need the product. In spite of the accumulation of lard, which increased 10,000,000 pounds at Chicago in the first half of June, heavy barrows and packing sows are still selling at a small discount but the spread is sure to widen later on. In another week or two receipts of hogs will begin to decline if they have not already started to do so. This should mean an advancing market.

Clearances of hog meats and lard are making an excellent showing and foreign buyers were reported last week to be actively in the market for additional stocks. Forign buying usually shows a decided increase in the late summer, so that the present spurt may mean an early start. Hot weather has reduced the domestic demand for fresh pork, but helped the sale of smoked meats.

Feeders Contracting for Lambs.

Feeder buyers are playing for a repetition of last year's fat lamb performance and are contracting for thin lambs in all the range states. A broad demand at the leading markets is expected this summer and fall, in addition, but values should be lower later on than they are now. At least the selections will be more choice.

Advance in Wool Halts.

Following a slowing down in foreign wool markets with declines of 5 to 10 per cent on coarse grades in London and Australia, the domestic market has become less active. Prices at a sale in Texas were a shade lower, although Boston quotations came higher. The American Woolen Company made the third successive advance in cloth prices during the week. Mills are resisting further upturns in prices of raw materials and are not taking all the wool offered. The course of the market will hinge upon the trend of prices abroad, the progress of tariff legislation and the tenacity of owners of the remainder of the clip not yet in manufact... hands.

Wheat Harvest Is On.

Wheat harvest is in full swing already in the southern (Turn to page 12)

Recent Range of Livestock Prices at Our Principal Markets.

Cattle—	Denver.	Kansas City.	Omaha.
Choice and prime heavy steers (1100 lb. up).	.....	$8.90@ 9.60	$8.75@ 9.35
Good heavy steers	.....	8.40@ 9.10	8.50@ 8.85
Common heavy steers	6.50@ 7.75	7.15@ 8.15	7.50@ 8.00
Good light steers	8.50@ 9.00	8.40@ 9.10	8.50@ 9.00
Common to choice butcher heifers	5.00@ 8.25	5.35@ 8.50	5.65@ 8.40
Common to choice butcher cows	4.00@ 7.00	4.00@ 6.75	4.30@ 7.25
Bologna and beef bulls	2.50@ 5.50	3.50@ 5.75	3.75@ 6.00
Canners and cutters, cows and heifers	2.50@ 4.00	2.50@ 4.50	3.25@ 4.75
Canner Steers	3.50@ 4.50	3.50@ 4.75	3.75@ 4.75
Common to choice feeders (1000 lb. up)	.....	6.25@ 8.15	5.75@ 8.00
Common to choice stocker steers	5.50@ 7.25	4.50@ 8.25	5.50@ 8.00
Common to choice stocker cows and heifers.	3.50@ 6.00	3.25@ 6.25	4.50@ 6.50
Hogs—			
Top of Market	$ 10.20	$ 10.55	$ 10.45
Bulk of Sales	9.65@10.05	10.10@10.50	9.75@10.40
Heavy (250 lb. up)	9.65@10.00	10.10@10.40	.....
Medium (200—250 lbs.)	9.75@10.15	10.25@10.50	.....
Light (150—200 lb.)	9.80@10.20	10.20@10.55	.....
Smooth packing sows (250 lb. up)	8.75@ 9.25	9.00@ 9.40	.....
Stock pigs	.....	10.00@11.00	.....

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Celery Returns Good Profit.

Celery requires an exceptionally rich, loamy soil tending toward clay, an abundance of water, and intelligent handling. But given these, it will yield larger returns for the ground allotted to it than almost anything else in the garden.

Last season, from about one-tenth of an acre of land we sold $250 worth of celery. As the soil was very rich here, it permitted of close planting. About half this ground was put into Pascal and the remainder into Golden Self-Blanching.

The Pascal is much finer in quality and flavor than any of the self-blanching sorts, and it brings a much higher price, but the extra work required to blanch it, and the danger from either frost or rot, or both, while it is in the pit, takes off much of the extra profit.

The young celery plants are extremely difficult to raise, and we find it pays best to buy them of a local greenhouse, rather than to try to do this part of the work ourselves.

If set out too early, celery tends to run up to seed stalks. We plant from about the middle of June to the end of the first week in July. Before this the ground has had several stirrings to keep it lose and exterminate all weeds.

The old method of planting was to set the seedlings in double rows from three to four feet apart, but with very rich soil, we consider crowding the better practice. This is done in beds about thirty feet square, with narrow paths between. Trenches four inches deep and ten to twelve inches apart are made with a wheel hoe. In these the plants are set six inches apart, the older leaves having first been clipped off to prevent wilting. As soon as each row is planted water is run through the trench to settle the dirt about the roots.

As the plants grow, the earth is drawn in about them from time to time, until shallow ditches are formed between the rows. During the later growing season, water is allowed to flow through these several times a week to supply the abundant moisture necessary to proper development.

Late in August, the beds are boarded up around the sides to a height of from fourteen to sixteen inches. This excludes the light from the sides while the thick leaves shade the stalks from above. Treated in this way, the self-blanching varieties will bleach without further effort on the part of the gardener, and be ready for market a month or six weeks later.

This method alone, however, will not accomplish the work with the Pascal, though it will materially shorten the time it will require to remain in the pit. The crowding also forces it to grow tall and straight, which is quite an advantage.

The pitting is done early in the fall, before danger from the first killing frosts. Boards a foot wide are set on edge two and a half feet apart on a sunny exposure. Between the boards a trench is dug a foot or more deep, and the earth piled along the outside. The celery is lifted from the bed on a spading fork with a good clod of earth on each root, and placed on a wheelbarrow on which burlap has been spread. At the pit the burlap is lifted off by the four corners so as to disturb roots as little as need be. The tough outer stalks are broken off, and the plants carefully placed on the pit floor as close together as possible. More earth is added above to be sure of all the roots being well covered. When the setting is completed, water is run through the pit until the ground is well soaked. If this is thoroughly done at the first, very little, if any watering is needed later, as there is so little chance for evaporation. To protect plants from the cold, we place cross pieces two inches thick at frequent intervals along the top of the pit. Boards are laid over these, leaving the two-inch space open at the sides for ventilation. Burlap is spread over all and earth piled above. As the weather grows more severe, the amount of earth is increased and extra banking added along the sides. But the plants must have air. To admit this, joints of stovepipe are inserted every eight feet to act as ventilators. These are stuffed with burlap which is removed through the warmest part of all but the coldest days.

While the celery is in the pit, every precaution is taken to guard against injury from frost, while an equal amount of precaution must be taken against rot caused from too little air. A happy medium between allowing too much cold or too little air to enter is a hard one to hit, but upon the nicety with which it is attained depends the measure of success in maturing a paying crop of Pascal celery.—Esther Reeks.

Spraying for Plant Lice.

With favorable conditions, plant lice increase with great rapidity. If they appeared only in small numbers they would not be serious, but when millions of them are at work covering the entire lower surfaces of the leaves, the plants are soon killed. In the early spring the plant lice suck the juices of various weeds and other plants, but with the growth of melons, cucumbers, cabbage and other garden plants, the winged forms make their way to these plants, seek the under surfaces of the leaves, and here they begin to suck the sap and bear living young. They increase so rapidly that they will do much damage before being noticed unless the grower keeps a close watch. Some suggestions for control follow:

It is important that the grower keep a close watch in order to locate and destroy early colonies, which, if located in time, usually will be found on just two or three leaves. The infested leaves or the infested portion of the vine should be pulled off and buried.

In most instances, just as soon as the plant lice are discovered, the plant should be sprayed with nicotine sulphate or a strong soapy spray.

The nicotine sulphate should be used at the rate of one-half pint to fifty gallons of water, plus two pounds of common laundry soap. In making a small quantity, use one ounce of nicotine sulphate to six gallons of soft water, plus four ounces of soap.

The soapy spray is prepared by dissolving one pound of laundry soap in six gallons of soft water. With either of the sprays it is essential to apply it in such a manner as actually to wet the insect. This can only be done by using a sprayer equipped with a fine nozzle which will furnish sufficient pressure to produce a fine mist. The extension rod of the sprayer should be long enough to reach from one's hand to the ground without necessitating stooping. In spraying vines, the lower end of the extension rod should be turned up at an angle of 90 degrees, or equipped with an upturned angle nozzle.

Ample Water for Irrigation.

Sufficient water for irrigation and hydroelectric purposes seems assured this season in the Rocky Mountain and Pacific Coast states, according to preliminary reports of snow-surveying parties now in the field under the direction of the Weather Bureau of the United States Department of Agriculture. The work of measuring the depth of the snow in various places and computing the snow density in order to calculate the amount of real water that will be available is at present confined to Utah and Nevada.

Through other indications, the Weather Bureau is satisfied that there will be plenty of water in Arizona this year, so the survey does not include that state. Conditions at present in Nevada and Utah are reported to be about average. In Oregon, Washington, and Wyoming somewhat above the average amount of water may be expected, while in Idaho and Montana the heavy snowfall points to a greater supply of water than usual.

This service of the Weather Bureau is of special value to farmers in irrigated districts, who will not plant heavily unless they know that sufficient water will be available. Hydroelectric companies by means of this information can gauge the power and service for which they should contract.

Don't Kill the Snakes.

Snakes are among the farmer's best friends, but most of them do not realize it. Of course, all of the poison snakes should be killed, but the only one found in Colorado is the rattlesnake. All of the other kinds are beneficial. They kill enough mice in summer to pay for all the birds and birds' eggs that they eat. A snake will eat on the average eight mice a day, besides the bugs and the grasshoppers they eat. The damage that mice do in a year comes in the millions of dollars, so that the average snake pays for the small damages it does.—Harold L. Lucas, Fremont county, Colo.

To Control Cutting of Laterals.

When your laterals are so steep that they wash down into the soft soil, fill the holes and deep places with coarse stable manure, and tramp well, especially in the center, leaving the sides high to protect the banks. The strength of the manure will be carried by the water to your crops and evenly distributed, so use all the manure you can find room for in your laterals, and renew it when possible.—J. H. Freeman, C. E.

Early Cutting Injures Alfalfa.

Delaying the cutting of alfalfa until it is nearly in full bloom has been found a better practice than mowing it soon after blooming starts. Carefully conducted experiments indicate that the yields are larger over a period of years, and that the life of the stand is prolonged by delaying harvesting until the plants are nearly in full bloom.

Hay made when the plants are nearly in full bloom possibly is not quite so palatable, but this is offset by the gain in quantity of hay. The fields that were cut prior to or at the beginning of blooming showed a tendency to die out sooner. Cutting a crop late in the fall so that not enough growth was left for protection in the winter also had much to do with thinning stands.

In the past the growing of alfalfa in rows in dry regions has been recommended, but experimental evidence of the last few years shows that, with the exception of a few rare varieties the seed of which sells for a high price, this method is seldom practical. Where the rainfall is not sufficient to grow alfalfa in broadcast stands it can not usually be grown profitably in rows. A slightly larger yield may be produced, but not enough to pay for the added expense. Also the hay harvested on this cultivated ground is apt to be dirty and it is hard to cut and load.

Accumulating experience also has exploded some old notions about the value of cultivation of broadcast stands. It has been found that harrowing a field of alfalfa ordinarily does not increase the yield; neither does it prolong the life of the stand to any noticeable extent. The modified spring-tooth harrow does not injure the plants, but the disk often kills many and reduces the stand. Some sort of cultivation appears advisable in irrigated regions where the water carries a great deal of silt or where the soil has been compacted by the tramping of cattle pastured on the alfalfa. The experimental evidence indicates that there is usually little to be gained by cultivating broadcast fields when the stand is good. If weeds and grass work in and reduce the stand it is better to plow up the field and put in another crop for a year or two. It is hard to thicken a thin stand by cultivating it and sowing more seed; in fact, it is a waste of time in most cases.

Summer Fallow Yields Well.

Fall sown wheat is looking fine in Kit Carson county. We have had a fine winter and a wet spring. I believe if the plow was used more there would be better results. Generally speaking, there is too much farming with the disk. It is one of the best tools on the farm, but can be over-estimated in its use.

More summer tillage, better work, and less acreage for the average farmer would bring better results. We have a very rich, easy working soil here. I had wheat last year on summer fallowed land that yielded thirty bushels to the acre on land that has been farmed for upwards of twenty years. Farm this soil as well as you would eastern soil and your bank account will increase.

To summer fallow, disk harrow in the spring, follow up with a smoothing harrow, and plow after the middle of May. The plow should be followed closely with the smoothing harrow and keep harrowing to destroy weeds and make a firm seed bed. Sow good, clean seed from August 10 on. You might not raise anything then, but I have never yet failed. Twenty bushels to the acre was the least and forty-two bushels to the acre was the most I have ever raised. I have known of better yields, but that was good.—W. C. Lamb, Kit Carson county, Colo.

Buys Certified Seed Potatoes.

In some Southern states where potatoes are an important crop, growers are taking an increasing interest in certified seed, but according to state officials and representatives of the United States Department of Agriculture, who are cooperating with them, special legislation is necessary to prevent local seedsmen from selling ordinary seed stock or even table stock as certified seed.

Many growers now recognize the value of superior seed and are willing to pay a premium for it, but they are discouraged by frauds perpetrated upon them by unscrupulous dealers. However, the farmers may protect themselves to a great extent if they will look for the certification tag which should be on every sack of certified seed potatoes. With this tag to start from it is possible to trace any lot of seed back to the grower or dealer who put it up.

Not only the growers, but many of the seed dealers have been impressed with the importance of getting in nothing but the best seed. This year twenty-two carloads of certified seed potatoes, all of the Triumph variety, were planted in Louisiana alone. Twelve carloads came from Wisconsin and ten from western Nebraska. It is claimed that by the use of this high-grade seed the yields in that state are being increased forty bushels or more an acre over that of much of the seed formerly sold there.

Colorado's 1922 Wheat Crop.

A total production of 24,732,000 bushels of wheat for Colorado, based on June 1 conditions, is the forecast of the crop reporting service, compared with a final estimate of 23,239,000 for 1921, and 17,844,000 bushels for 1919, as reported by the census. Colorado winter wheat reached June with a condition of 80, according to the report, which is 8 points below the ten-year average for June. This would indicate a crop of winter wheat of 16,188,000, or an average yield of 15.2 bushels to the acre on the 1,173,000 acres left for harvest. Weather conditions through May were generally favorable for the development of the crop. There was little surplus moisture in the soil, however, and opportune rains will be required to mature a good crop. The acreage of spring wheat for Colorado for harvest this year is estimated as 110 per cent of last year, the preliminary estimate being 410,000 acres. The June 1 condition was 92, which is the ten-year average for June 1. Based on this condition the average yield should be 18 bushels to the acre, or a total production of 7,544,000 bushels, if conditions remain favorable until harvest.

How To Crowd Two Days' Tillage Work Into One

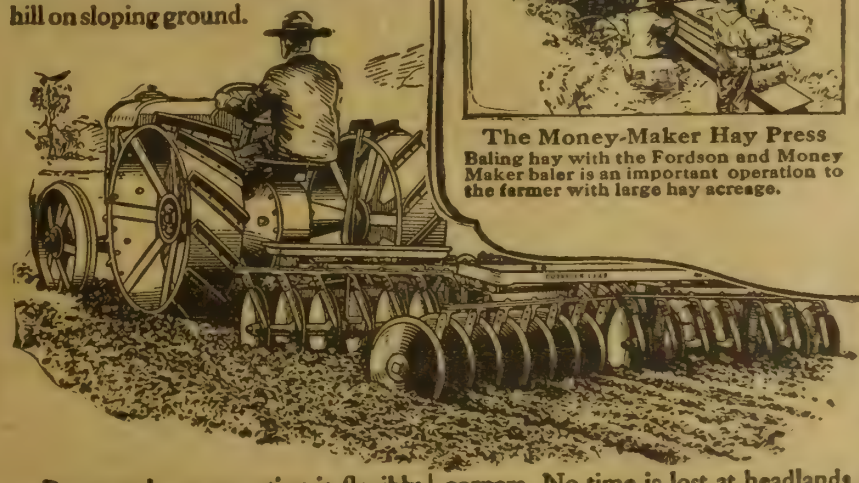
MANY jobs are done on Fordson farms that would not be done if horses were depended upon for power. More thorough seedbed preparation is possible because there is more time available for this important work. Good farming practice demands that stubble be disced immediately after removing the grain from the fields, to return valuable humus to the soil, to make fall plowing easier and to conserve moisture.

The success of the next crop may depend upon this saving of moisture already in the soil. For this work with the Fordson, as well as for cutting up corn stalks, cotton stalks, and for many other jobs, no other implement does as well as the double disc harrow. There is one disc harrow especially built in every feature to work with the Fordson.

Roderick Lean
Automatic Engine Disc Harrow
Made dy Roberick Lean Mfg. Co.,
Mansfield, Ohio

This tool is operated entirely from the tractor seat, and the angle of the discs changed by the power of the tractor, providing quick and easy adjustment without stopping and with little effort on the part of the tractor operator. The entire harrow may be fully and instantly straightened for wheeling through a wet spot, or over an obstruction, while the tractor is in motion.

Working your ground with the Roderick Lean means working every foot of soil. Double reach bars connecting the rear harrow to the front, make the rear disc blades always cut midway between the cuts of the front blades. They cannot track. The rear section cannot slide down hill on sloping ground.



Because the rear section is flexibly connected to the front, this harrow turns short and works close in field corners. No time is lost at headlands—straightening of gangs for turning is unnecessary. The harrow works at uniform depth its entire width, leaving headlands level and well pulverized.

These and many other features have placed the Roderick Lean Automatic Engine Disc first in the estimation of Fordson owners.

The World Famous Oliver No. 7
On thousands of farms, the world famous Oliver No. 7 has been the plowing partner of the Fordson from the beginning.

The Oliver Two-Way Sulky
Fordson power is available in plowing to the irrigation farmer with the Oliver Two-Way Sulky. Power lift, easy running.

Fordson Disc Plowing
Oliver Fordson special disc plows have set a new standard. They penetrate the toughest soils, yet are light running.

Good Work With Roller Pulverizer
Final Fitting of the seed bed with Fordson power and the roller pulverizer has meant more bushels for many farmers.

Roderick Lean "Cutmore" Mower
Attaches without changes to the Fordson. Power taken direct from drive worm. Makes a one-man outfit with Fordson.

The Amsco Tractor Drill
Tractor speed and accuracy utilized by the Fordson owner with the Amsco special drill. Force feed makes positive planting.

The Amsco Two-Row Cultivator
Cultivating corn is easy for the Fordson farmer with the Amsco Cultivator—special for the Fordson. Made for hard work.

Money-Maker Ensilage Cutter
Fordson silo filling with the Money-Maker done quickly and cheaply. Strength and scientific design give perfect work.

The Money-Maker Hay Press
Baling hay with the Fordson and Money Maker baler is an important operation to the farmer with large hay acreage.

Wood Bros. Individual Thresher
The Wood Individual Humming Bird Thresher and Fordson make short work of threshing. All grain is saved.

Ford Dealers Everywhere Sell Standard Fordson Equipment

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Our Cover Picture.

The attractive farm house shown on the cover page of this issue of Western Farm Life is the home of C. J. Cover, Otero county, Colo., near Rocky Ford. Mr. Cover carries on diversified farming, rotates his crops, and keeps a herd of purebred Duroc Jersey hogs, Holstein cows, beef cattle, Shropshire sheep and a large flock of chickens. He is a native of Kansas, came to Routt county, Colo., where he was one of the early pioneers. He later moved to Rocky Ford and located on his present farm. He is president of the local Farm Bureau, president of the Rocky Ford Ditch Company, a director in the Rocky Ford National Bank, and takes an active interest in the public schools and in the local Fair associations. He has been a farmer all his life, gone through many hardships, has raised a fine family of four boys and three girls, accumulated worldly goods sufficient so that he can now enjoy life in comfort and give to the community in which he lives the benefit of his experiences.

Milk Cow Ranks High as Source of Income.

During 1921 the total value of dairy products produced on farms of the United States was 20 per cent less than for 1920, when the peak value of $3,025,400,000 was reached. However, $2,409,600,000, which was the amount received for dairy products produced on farms in 1921, is not a small figure, says the Dairy Farmer. It represents an average income for the year of over $370 for every farm in this country. Considering the very small amount received by many farms, it is quite evident that, on those farms where the dairy cow is seriously considered and given a fair chance, she befriended her owner in a large way during the days when her friendship was sorely needed.

We all remember that in 1919 we were passing through prosperous days, but that year the total value of dairy products on farms was only $2,969,600,000. No other farm products have lost as little in total valuation during the past year or the past two years as dairy products have, and the prospects are that the milking of good, well cared for cows will continue to rank high as a source of farm income.

What Is Government Forest Work?

Citizens of a state like Colorado and adjoining states with large national forests will be interested in a little booklet of forty-seven pages, entitled "Government Forest Work," just issued by the Forest Service of the United States Department of Agriculture. "What are the duties of a forest ranger or supervisor; how does the Forest Service select timber for cutting; under what system are cattle and sheep grazed?" Answers to these frequently asked questions and to many others are found between the covers of this booklet, which may be obtained free of charge from any Forest Service office, or by writing the Department of Agriculture, Washington, D. C.

Farmer Company Ready to Handle Grain.

Financial negotiations for $50,000 to meet the capital stock requirements for admission of the U. S. Grain Growers' Sales Co. to the Chicago and Minneapolis grain exchanges and other arrangements for credit of a million dollars or more to finance grain movements, were reported to the directorate of the U. S. Grain Growers, Inc., by President C. H. Gustafson at the last quarterly board meeting.

B. F. Hales, farmer-business man and formerly active in the grain markets in the barley and feed business, is the man who stands ready to give such financial assistance to the grain selling operations of the U. S. Grain Growers, Inc. Mr. Hales is extremely active despite his 67 years, and has a record in financial circles of Chicago as a fighter. On the other hand, he now is devoting practically all of his time and attention to his 800-acre farm outside of Chicago where he has a herd of more than 200 registered Shorthorns and is known as one of the most generous supporters of the Shorthorn cattle trade for the past few years.

G. W. Hales, nephew of B. F. Hales, a successful feed manufacturer, in addition to giving attention to the interests of his uncle, has been in active charge of the negotiations with the U. S. Grain Growers, Inc. The younger Mr. Hales' interest in the farmers' co-operative grain marketing program dates back to the time when the Committee of Seventeen was conducting its investigation prior to recommending the organization of the U. S. Grain Growers, Inc., at which time Mr. Hales placed his services at the disposal of the committee. G. W. Hales was originally a farmer and first started in the grain business as a laborer in one of his uncle's terminal elevators at Chicago, advancing to manager of the plant and finally started his own feed and grain company, with his uncle's assistance.

Control of the sales offices will not be affected by the introduction of the private financing arrangement and the contractual arrangements upon which the Messrs. Hales and Grain Grower officers are in agreement will effectually safeguard against any form of outside control, J. M. Mehl, special counsel for the U. S. Grain Growers, Inc., told the directors in making a detailed report on the negotiations. This step was considered necessary and advisable, he said, because the financial condition of farmers' elevators and grain farmers generally at this time did not make it probable that sufficient stock of the U. S. Grain Growers' Sales Co. could be sold without delaying arrangements for handling grain. As soon as farmer money can be brought into the U. S. Grain Growers' Sales Co. through sale of stock to farmers' elevators and individual farmers, the $50,000 barrowed from Hales will be retired.

The $50,000 is not needed for the purpose of handling grain, but to meet the capital stock requirements of grain exchanges so that the U. S. Grain Growers' Inc., would be able to handle any and all shipments of grain which it might receive, without reselling to a commission firm with membership or to "scalpers," as other farmers' grain firms have been compelled to do. Other financing arrangements have been made for credit of a million dollars or more if needed, to cover grain movements, whether the grain is handled through the sales company with grain exchange membership or sold direct without going through a grain exchange.

Advances from millers, Atlantic Coast farmers' organizations and foreign importers, asking for the opportunity to enter into contract for direct shipments of grain of standard grade and quality are repeatedly coming to the officers of the U. S. Grain Growers, Inc., Mr. Gustafson told the board of directors. He stated that an Austrian importer would confer with the officers at an early date relative to purchase of millions of bushels of corn on contract.

Arrangements for the use of terminal elevator facilities and particularly for the use of conditioning equipment are now being negotiated as an additional arrangement with Messrs. Hales.

A Pay Day Every Week.

A Colorado farmer's wife wrote a letter to The Country Gentleman, which was used as the basis of an editorial in that publication recently. In this letter she tells how her husband and herself bought a forty-acre farm seventeen years ago, paid for it and have since added to it another 160 acres. It is a story of splendid courage in the face of occasional bad years and of success won by hard work. But there is one paragraph in the letter that contains more than many whole books that have been written on the subject of farming. It says:

"The garden, chickens, cows, hogs and small fruit - always enough for home use and some to sell —made a payday every week. And we have always had a good living."

There isn't anything spectacular about that sort of farming—no big killings, but few foreclosures of a mortgage either. Just the safest kind of farming is all. This farmer's wife added in her letter that their house is equipped with electric lights and a modern water system. They are trying to make their house a wholly comfortable home.

We wonder if this family may not also be subscribers to Western Farm Life. If this woman is one of our subscribers we feel sure all of our readers would like to know more about what they have accomplished.

Colorado Second in Head Lettuce.

With a favorable season through the harvest time Colorado should rank second among the states in head lettuce production this year. California is the leading state in the production of this crop. In 1919, according to the Federal census, Colorado ranked eighteenth in acreage devoted to this crop. This remarkable advancement in lettuce production is due to the increase in lettuce in high altitudes. Reports from the county assessors to the State Immigration Bureau indicate that at least 6,000 acres are being devoted to lettuce this year, chiefly at altitudes above 6,500 feet. In 1910 the census bureau reported 6,121 acres of lettuce harvested in California, New York ranked second that year, with 3,392 acres. California lettuce comes into the market in the late winter and early spring, while that from New York comes into market early in the spring, or is leaf lettuce, which does not offer serious competition to the high quality of head lettuce grown in Colorado. Several western states are growing late head lettuce this year, but Colorado will lead them all in acreage devoted to the crop.

The production and marketing of lettuce requires great care and considerable skill. Production in 1921 was not satisfactory, due partly to lack of experience among growers and partly to an unfavorable season. Under favorable conditions a carload of lettuce should be marketed from each acre, but the production in 1921 fell far short of this average.

Sentiment of Farmers on Tax Revision.

Through E. R. Bliss, chairman of the farm bureau taxation committee, farmers will have the opportunity to get their views directly before the recognized authority on tax revision. Mr. Bliss is now asking for local action so he can present to the committee on tax revision representative views from over the state. All farmer organizations are urged to take advantage of this opportunity. The executive committee of the tax revision committee of one hundred is proposing that a constitutional amendment be initiated to permit exemption from taxation of all intangible property and substituting a personal income tax law. They point out that experience in every state shows that taxation of intangible property is not feasible and that the income tax is the only practical and efficient means of reducing taxes on tangible property, and equalizing the burden of taxation on all kinds of property.

Big Colorado Cantaloup Acreage.

Colorado has the largest cantaloup acreage of the states producing this crop, or 16,000 acres, as compared with 8,200 last year. The acreage in sixteen states as estimated by the United States Department of Agriculture is 58,310, as compared with 47,230 acres last year. Arkansas ranks next to Colorado in cantaloup production, and California comes third.

Plan for Poultry Culling Campaigns.

Getting rid of the hens of low productive capacity will soon be the order of the day in many localities. This means the elimination of the hen that doesn't pay for her feed in eggs. Tests have been devised through the application of which the poor layer can be distinguished from the hen that has ample egg capacity. Farmers are keenly interested in this phase of extension work carried on by the agricultural college, as it applies to practically every farm. An article in our poultry department tells of culling methods and refers to a most valuable bulletin of instruction on the detailed methods to follow in culling. This will be of unusual interest to every one handling poultry.

The average cost per square yard of plain cement concrete road paving, not including grading, is $2.57, according to Bureau of Roads figures on Federal aid roads of the United States.

From the Nation's Capital

FARMERS OPPOSE TRANSFER OF FORESTRY SERVICE TO INTERIOR DEPARTMENT.

E. E. Reynolds.

THE controversy over the proposal to take the Forestry Service from the Department of Agriculture and place it in the Interior Department is attracting considerable attention. The farmers everywhere, if they are correctly reported, are decidedly opposed to this transfer, and are displaying resentment toward those who are urging the proposition.

Gray Silver, Washington representative of the American Farm Bureau, says that many letters have been received from farm leaders protesting against the efforts of the Secretary of the Interior to control the 120,000,000 acres of forest lands. There is a feeling of apprehension, according to Mr. Silver, that Secretary Fall's plans for the exploitation of the national resources has the approval of the administration, and that the forest lands are the next to be sacrificed. Such a move would be a death blow to the forestry work of the Department of Agriculture.

W. B. Jamison of Colorado, counsellor of the American Farm Bureau Federation, who is now in Washington, says that his contact with cattle men reveals a general endorsement of the Department of Agriculture's administration of the forests. Before the Department of Agriculture took control of the Forest Service conditions in the cattle country were far from satisfactory.

Congress is taking an interest in this controversy, with a strong opposition to the efforts of Secretary Fall to secure control of the national forests. Chairman Gilbert N. Haugen of the House Committee on Agriculture and Forestry, is quoted as predicting that Secretary Fall's attempt to annex the Forestry Service to his department will result in all public lands being taken from the Interior Department and placed with the Department of Agriculture. If this is done, Congressman Haugen says it would allow the Department of Agriculture to apply the same methods of development to the public lands that it has to the forests.

It is the opinion of close observers on Capitol Hill that the proposal to transfer the forests to the Department of the Interior has small chance of passing Congress.

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Bureau of Markets Conference in Denver.—A meeting of field statisticians of the Federal Bureau of Markets and Crop Estimates and leading livestock producers in the range states will meet at Denver, July 17 to 19, to consider the program for livestock estimating, for which Congress recently made an appropriation. Officials of the Federal Bureau of Animal Industry and representatives of the States Extension Service will be asked to participate, and farm organization leaders will also be invited. The Institute of American Meat Packers will be represented. The peculiar problems involved in estimating numbers of livestock in the range country will be given special consideration at the Denver conference.

A report issued by the field statistician of Arizona, L. M. Harrison, in cooperation with the Arizona Cattle Growers' Association, the Arizona Sanitary Board, and the Arizona Industrial Congress, showing the number of cattle at different ages in each county, shipments of cattle from each county in 1920 and 1921, the condition of range pastures on May 1 and monthly comparisons with previous years and the estimated number of feeder cattle available for delivery on July 1, 1922, represents the character of some of the livestock data it is hoped to make available for all the range states. This meeting is one of the initial steps in the Department of Agriculture's campaign to develop a Federal livestock reporting system that shall be as efficient as its crop reporting system.

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Increased Interest in Farm Management Demonstrations.—The States Relations Service reports great activity in farm management demonstration work. According to H. M. Dixon, over 800 farm account schools, with an attendance of 20,000, were held in 1921. The county agents' reports show that in 895 counties 51,083 account books were distributed; 519 counties reported 18,448 books kept, and 8,454 farmers assisted in summarizing their accounts. Nearly 3,000 farmers made changes in their business as a result of keeping books. Mr. Dixon says these schools have become the most satisfactory method yet in use in teaching farmers the various uses and values of farm accounts and giving them facts as a better basis for good thinking along farm management lines.

"On many farms throughout the United States," says Mr. Dixon, "the largest opportunity for improving the farm business with the capital and labor available is through the improvement of the livestock. According to the United States census the average amount of milk produced per cow was 3,113 pounds in 1910, and 3,406 pounds in 1920. The wool per sheep was 5½ pounds in 1910, and 6½ pounds in 1920. With these averages, considering the great numbers that are below the average and then taking into account the production secured on the better managed farms, the great opportunity for improvement is apparent.

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National Grange Opposes Ship Subsidy Bill.—While the shipping interests are giving wide publicity to the recent statement of J. R. Howard, president of the American Farm Bureau Federatio,n, in favor of the ship subsidy bill, it is evident that Mr. Howard stands alone among the farm organization leaders upon this proposition.

The position of the National Grange is unqualifiedly against a ship subsidy, as was so stated by Dr. T. C. Atkeson, the Washington representative, before the same Congressional committee that heard Mr. Howard. National Grange Master Lowell recently sent copies of the ship subsidy bill to the masters of all of the state granges, with the request that the masters give their opinion as to the advisability of Congress voting a ship subsidy. National Master Lowell reports to the Washington headquarters that the replies received are almost unanimously in opposition to the subsidy, only one reply being favorable.

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Agricultural Inquiry Commission Report.—The final report of the Congressional Joint Commission of Agricultural Inquiry contains much information of special interest to farmers. Discussing that part of the report which relates to the wide margin between the prices received by the farmer and the prices paid by the consumer for fruits and vegetables, Representative Sydney Anderson, chairman of the commission, says:

"In the first place, our investigation pretty thoroughly disposes of the constantly recurring popular myth about the wanton destruction of perishable produce in order to boost the price. One reason for the wide spread between consumers' and producers' prices for fruits and vegetables has been found in lack of terminal market facilities."

The commission found a noticeable development in the improvements in grades and standards in the fruit and vegetable industry, but much progress can still be made. There is need for greater standardization of containers and for more uniformity in grades.

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Vacancy to Be Filled on Farm Loan Board.—W. H. Joyce has resigned as a member of the Federal Farm Loan Board. As Mr. Joyce was appointed as a democrat and comes from California, it is probable that the vacancy will be filled by a Democrat from the Mountain or Coast states, providing an opportunity for the West to secure the appointment of a farmer on the board. Mr. Joyce's term expires in 1928.

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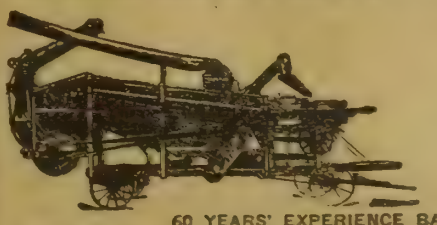

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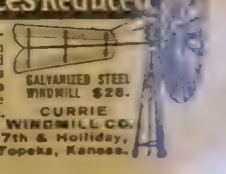

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So confident is Dr. Alexander that his discovery will rid your house, barns and livestock of these pests that he offers to send a $2.00 supply for only $1.00 on the guarantee that if Rid-O-Fly does not solve your fly problems it will cost you nothing. Two big Kansas City banks guarantee the reliability of this offer.

SEND NO MONEY—just your name and address to the Alexander Laboratories, 1604 Gateway Station, Kansas City, Mo., and this introductory offer will be mailed at once.

Regularity is essential in the feeding of dairy calves. Milk is best fed at blood temperature.

The Rural Household

Questions about home problems promptly answered by letter and through the magazine. Letters from women containing helpful suggestions for improvement of rural life are always welcome. Address all communications to Mary G. Collopy, Editor Home Department, Western Farm Life, Denver, Colo.

If you were busy being right,
You'd find yourself too busy quite
To criticize your neighbor long,
Because he's busy being wrong.

When making cotton garments of light shades of thin material stitch them with 150 or 200 white thread in a very fine stitch and note the improvement over 60 colored thread and a longer stitch.

When the tip comes off your shoestring, cut the end to a slant, and sew securely with thread. Then dip the whole end in the mucilage bottle and let dry. It will work as satisfactorily as it did when it boasted a tip.

Are your children listening to the songs of the birds? Do they build bird houses? Do they remember to place crumbs for the hungry birds? Does your school library contain interesting bird books? Could your community club arrange for an illustrated talk on birds? Thoughtful mothers realize the value of such interests for their growing children.

Assistant County Agent Appointed.

Miss Eva Floy Smith, graduate of Colorado Agricultural college, has just been appointed as assistant to County Agent Bascom in Larimer county, Colo. The greater part of her time will be spent with girls' clubs, but she will also give assistance to women's clubs which have asked for help in the clothing work.

My Neighbor's Story.

A letter from one of our readers answers our inquiry about trees:

"Have you seen the report made by W. J. Morrill, State Forester, regarding the numbers of trees planted in our county (El Paso) this year? A total of 8,536 trees were sold and, by actual count, over 15,000 trees were planted. Many of the farmers in our vicinity prepared their ground this year and will plant trees next year.

"I think that the tree planting campaign carried on by the agricultural committee of the Colorado Springs Chamber of Commerce was a big boost. They held meetings attended by the state forester. We had a good social time, good music, good speakers, but best of all, we learned what trees were best adapted to our dry land conditions, and how they should be planted.

"As I write this letter, I look out and see my Russian Olives and Honey Locust trees and I am a proud woman. They will soon pay for the care required."—Mrs. W. J. G.

Hot Weather Desserts.

With ice, or without ice, we can have cooling drinks, or desserts, during the hot weather. The following suggestions will interest women who have ice in their ice houses, or who can buy it occasionally.

Ice Cream—Either made with custard foundation, or the "Philadelphia," made of cream sweetened and frozen. With either of these as a foundation there are numerous variations possible by adding coffee, caramel, chocolate, nuts, or fruits.

If you have plenty of cream, you will like to make mousses and parfaits. These are made with a basis of whipped cream and are, of course, rich. They are frozen without stirring, being placed in molds and packed until firm in a mixture of ice and salt. There is this difference between a parfait and a mousse—the parfait contains eggs combined with a hot sugar sirup.

Less expensive and much simpler are ices and sherbets made with fruit juice foundation. In making sherbet, we combine a sugar and water sirup with the fruit juice and add a small amount of gelatin, or fold in stiffly beaten egg whites just before completing the freezing.

Success in any of the above mixtures depends largely upon the proper freezing. Columbia University, in recent experiments, has demonstrated that a proportion of eight to one is better than three measures of ice to one of salt. We are glad to know this because we can have a finer product at less cost.

The ice cream mixture should be cooled to 70 degrees Fahrenheit (about room temperature) before it is put in the freezer. This shortens the time of turning and helps to prevent the formation of butter fat.

Turn the freezer rather slowly at first. When the cream begins to stiffen then turn rapidly in order to beat in air so the ice cream will be light and fluffy.

Philadelphia Ice Cream—Thin cream, 1½ qts.; sugar, 1¼ cup; vanilla, 2½ tablespoonfuls; salt, ⅛ teaspoonful. Mix these ingredients and freeze according to directions given above.

Fruit Ice—Fruit juice, 2 cups; lemon juice, 2 tablespoonfulls; sugar, 1½ or 2 cups; water, a quart. Make a sirup, boiling the sugar and water together for five minutes. Allow to cool. Add fruit juice, strain. Freeze according to directions given above. The amount of sugar varies according to the fruit. If the fruit is sour, use 2 cups.

Our Fashion Service.

All patterns 12 cents each. Address Western Farm Life, Pattern Department, 1518 Court Place, Denver, Colo.

Read This Before Ordering: Patterns ordered through this magazine are mailed promptly from the factory at Brooklyn, N. Y., and arrive in 10 to 13 days from time order reaches Western Farm Life. Be sure to specify size and number of patterns. Write your name and postoffice address plainly to avoid delay. These patterns are handled at cost, as a service to our women readers. The price of 12 cents includes postage.

4026—A Pretty, Simple Frock. This style reflects the season. Its low collar and wide sleeve spell coolness and comfort. Voile with embroidery or gingham with bands of organdy would be pleasing for this model. The pattern is cut in three sizes: 16, 18 and 20 years. An 18-year size will require 5½ yards of 32-inch material. The width of the skirt at the foot is 2⅝ yards.

4025—A Dainty Frock. One of the season's pretty models is here portrayed. Convenient pockets are placed under the tab extensions of the waist, which has long lines and girdle extensions which close over the back. White linen with frills and bows of organdy would be pleasing. Pongee in a natural shade with pipings of green crepe would be attractive. The pattern is cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size will require 4⅛ yards of 40-inch material. The width at the foot is about 2¼ yards.

4037—A Becoming Dress for School Days. A frock with long lines, plait panels, and a vest, so like a "grown up's," this will surely please the growing girl. As here shown, white linen and blue and white plaid gingham are combined. The pattern is cut in four sizes: 6, 8, 10 and 12 years. A 10-year size will require 3⅝ yards of 36-inch material.

4019—A Stylish Frock for the Growing Girl. The graceful fullness of the drapery and the "tie on" effect are popular features of this model. It is nice for crepe, and also for voile. Ribbon, hemstitching or a picot edge would serve well for decoration. The pattern is cut in four sizes: 8, 10, 12 and 14 years. A 10-year size requires 5¼ yards of 40-inch material if made with long sleeves. With the sleeves short ½ yard less is required.

CATALOGUE NOTICE.

Send 12c in silver or stamps for our UP-TO-DATE SPRING AND SUMMER 1922 CATALOGUE, showing color plates, and containing 500 designs of Ladies', Misses' and Children's Patterns, a concise and comprehensive article on dressmaking, also some points for the needle (Illustrating 30 of the various, simple stitches), all valuable hints to the home dressmaker.

Farmers' Service Bureau

Readers are invited to make generous use of this department. Questions regarding any branch of farming, livestock production, animal diseases, legal matters pertaining to the farm, homestead inquiries and the like cheerfully and promptly answered by letter and through the magazine. Address all communications to SERVICE BUREAU, WESTERN FARM LIFE, Denver, Colorado.

Cannot Obstruct a Public Road.

Has a neighbor the right to herd his cattle on an open section of land which I own? Can I drive them off? Is a man allowed to build ford crossings on a road which has been declared open? Is it permissible to let a Holstein bull run at large?—W. R., Adams county, Colo.

You have to fence out the cattle with a lawful fence. Obstructions may not be placed upon a public road. Inferior bulls may not be run at large.—Hamlet J. Barry, Equitable Building, Denver.

Contract Wrongfully Altered.

In renting a place from a man living in Montezuma the business was done by mail and the contracts signed. The owner changed the contract I signed and sent to him by inserting clause requiring me to deliver his part of the crop to the elevator. It is not customary here to deliver rent grain to the elevator. Is this contract legal?—R. S. C., Weld county, Colo.

The landowner had no right to change the terms of the lease, unless you assented to it.—Hamlet J. Barry, Equitable Building, Denver.

Start Pasture on Summer Fallow.

I have agreed with the animal husbandry department of the Colorado Agricultural college to make a trial of a pasture grass mixture on five acres of land. This demonstration is to be on upland without irrigation. The mixture suggested is bromus inermis, 12 pounds; meadow fescue, 8 pounds; and yellow blossom sweet clover, 5 pounds, this amount of seed to be sown on one acre. No suggestions have been made as to preparations for seeding. How deep would you advise plowing this land this spring? We intend to summer fallow carefully. Should we plow again this fall, or wait until next spring?—C. W. F., Weld county, Colo.

In preparing a summer fallow to be seeded to permanent pasture the following spring, it should be plowed as deeply as possible at the start, and the next season before planting time it should be re-plowed five or six inches deep and thoroughly packed and the clods broken with a corrugated roller. As a general rule, the deeper the plowing at the start the longer the life of the pasture.—E. R. Parsons.

Remedy for Wind Galls.

One of my horses became lame in one fore leg. In a few days a swelling began just above ankle joint on the inside and towards the back. The swelling continued and now is on both sides. Does not seem to be swollen in front. There is no indication of any injury.—R. L. L., Elbert county, Colo.

The soft enlargements that occur in the region of the fetlock are commonly termed "wind galls." They are caused by strains, direct injury to the part, or continuous work. The soft swellings are caused by the sheaths surrounding the swellings becoming distended with synovia. When they first appear there is liable to be more or less lameness. You should give the animal complete rest. A shoe high at the heel will relieve the tension in that region. Cold bandages, and stimulating leg washes are indicated. You might stand the leg in cold water, and later use mild blisters or liniments. Chronic cases are sometimes removed surgically.—G. H. G.

Keeping Milk Sweet.

Is there any preparation which will keep milk and cream from souring and have no ill effect on the persons using it?—S. L. S., Grand county, Colo.

There is no preservative which can be used in keeping milk, or cream, from souring without having deleterious effects on the persons using the product. Some unscrupulous producers and dealers occasionally attempt to use various preservatives, but such practices are prohibited by law and ordinances in all parts of the country. Keeping milk and cream sweet is a matter of cleanliness and sterilization of all utensils used. Milk sours through the action of minute organisms, or bacteria, everywhere present. The first step is to keep these organisms from getting into the milk by cleanliness about the stable and the milking of the cows. Straining out the hairs and particles of dirt does not remove the bacteria. All utensils such as pails, cans, strainers, etc., should be carefully washed and sterilized in boiling water, as they all furnish lodgment for the milk-souring bacteria.

Reducing the temperature of milk and cream as quickly as possible to the temperature of cold well water is another important step in keeping it sweet. It is impossible to keep all the organisms from getting into the milk, but, since they multiply and increase rapidly only when the milk is warm and very slowly at the temperature of well water, the milk will remain sweet much longer if cooled quickly and kept at a low temperature.—G. C. W.

Opening in Cow's Teat.

What can be done to stop a leak in a cow's teat? Just before she freshened, she cut the teat, and now there is a small leak on the side which drips milk.—T. J., Utah.

It is practically impossible to close the opening in the cow's teat while she is giving milk. The best you can do is to wait until she is dry, when a minor surgical operation is indicated. The wall of the fistula must be freshened and kept in contact by means of a suture until healing has taken place.—G. H. G.

Cow Has Abscess on Jaw.

Last summer a swelling came on a cow's jaw. The lump gradually got larger and we feared that it was lumpy jaw, but pus formed and it broke and run for a long time. Now it bleeds a little from every little bump.—W. T. H., Sedgwick county, Colo.

The symptoms given do not indicate actinomycosis (lumpy jaw), but this can be determined by sending some of the pus (teaspoonful) to the Agricultural college, veterinary division, Fort Collins, Colo. The pus from an actinomycosis lesion is thick, creamy, granular, and without an offensive odor. If it will have an extremely offensive odor. the pus is associated with diseased bone, Possibly it is an abscess due to eating foxtail or barley beards, in which case it should be opened freely, cleaned and disinfected.—G. H. G.

Some Form of Paralysis.

My young pigs about two and a half months old have become helpless in their hind parts. They were a nice lot of pigs and it seems that the best ones are the ones affected. My renter is feeding them fresh skimmed milk and does not feed them corn.—J. S., Boulder county, Colo.

The symptoms indicate some form of paralysis. Paralysis of the hind parts may be the result of a sort of deficiency disease. In other words, there is something lacking in the rations being fed. Skimmed milk is a good all round feed, but I would suggest giving them a little greater variety. If alfalfa pasture is not available, give bright alfalfa hay and a little grain of some kind, or shorts with the milk. Roots are a valuable addition to the diet. Dr. Glover of the Colorado Agricultural college states that carrots are almost considered a specific for some forms of paralysis. The trouble may be rheumatic, caused by sleeping on wet plank or concrete floors. Hogs should always have dry beds.—G. C. W.

Curing Hard Milkers.

Is there any cure for a hard milking cow? I have a fine Holstein now due to freshen with her third calf. She has been a very hard milker.—W. F., Conejos county, Colo.

Hard milking is generally caused by the strong sphincter muscle closing the teat tighter than it should. In most cases, the use of teat plugs will remedy the condition. These plugs are made of lead, or hard rubber, and are placed in the teat duct and a tape tied around the teat through the eyehole in the plug. This plug is left in the teat between milkings and gradually the muscles become somewhat relaxed and the opening remains larger.

Occasionally there are conditions in which the hard milking is caused by a lump in the upper part of the teat, which seems to drop down and close the opening. If this is the condition, the teat plug method of treatment will not be sufficient. An instrument called a bistoury is used to enlarge the opening. This instrument is placed in the opening and by means of a screw a small knife edge is projected from the side and on withdrawing it this blade makes a cut in the walls of the teat duct and the surrounding muscles. Following this operation a teat plug is kept in the opening, except at milking time, until the cut heals.

Nothing should ever be inserted in the teat opening unless it is first thoroughly disinfected and sterilized. Carelessness in this respect will introduce germs into the udder, causing inflammation that may result in ruining the animal for milking. In using teat plugs, or bistoury, they should first be thoroughly washed and boiled and before inserting into the teat placed in a 5 per cent solution of carbolic acid and inserted without touching with the hands any part that enters the duct. It would be far safer to have a competent veterinarian use a bistoury than to take any chances on ruining a good cow.—G. C. W.

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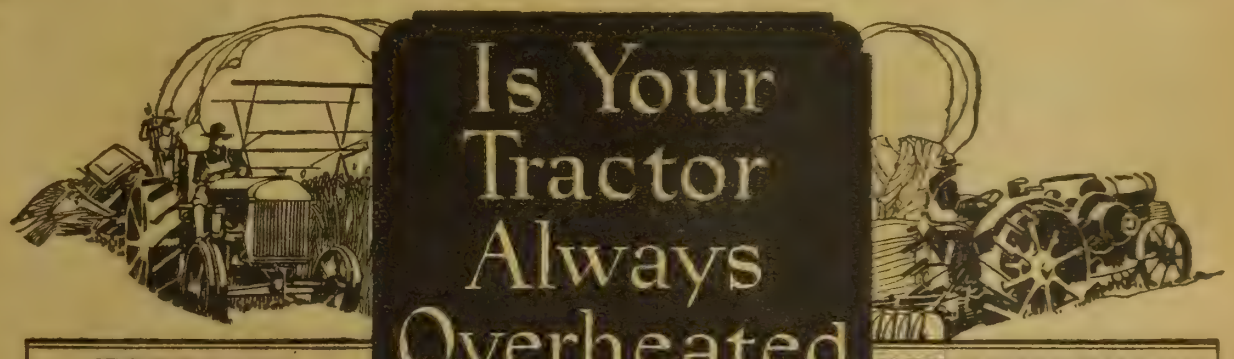

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Colorado Solving Irrigation Problems.

In irrigation development Colorado is second only to California, and in laws, customs, and standardized practices it has become in many respects the leader in such development in the Rocky Mountain region. For this reason, and because Colorado bears a close resemblance to several neighboring mountain states in aridity, elevation, topography, soils, and crops, Department Bulletin 1026, "Irrigation in Northern Colorado," by Robert G. Hemphill, just issued by the United States Department of Agriculture, should be of interest to many farmers and irrigation men in this territory.

The investigations described in this bulletin were made in the valley of the Cache la Poudre river, which drains an area of approximately 1,900 square miles. The valley has a light rainfall, a wide range in daily and seasonal temperature, low relative humidity, moderately high winds, and a comparatively low rate of evaporation. There is usually enough rain in the spring to start the crops without the assistance of irrigation water. Most of the soil is a well-drained, sandy loam that is easily irrigated and holds moisture well. The water supply of the valley averages 464,000 acre-feet, and as all the supply is taken further projects are not feasible.

The topography of the valley is such that a large proportion of the seepage return is available for use there, and it plays an important part in irrigation. The high percentage of return indicates that when the return reaches the maximum on other streams many water rights, both direct and storage, which are now not dependable, will become good. The certainty and uniformity of this supply will produce results comparable to those produced by stored water.

By a system of exchange of water developed in the valley 50,000 acre-feet of stored water is made available for use in canals above the reservoir. The system promotes better distribution from the river, and confines the daily fluctuation of the river to one of the larger canals, where it can be "smoothed down" by the use of reservoirs as regulators. In addition, the pooling of interests required by the exchange has brought about a better understanding among the canal men of the valley, and there is now a tendency to get together and talk over differences before resorting to the law. The practice of exchanging water got the canal men of the valley into the habit of measuring water. The same principle and methods might be used elsewhere.

According to the bulletin, the obvious remedy for difficulties of distribution that constantly arise is a study of the streams of the state by experienced engineers and hydrographers to determine losses and gains in the streams; the return flow; characteristics of flow peculiar to each stream in flood and at low stages; and other pertinent facts.

The bulletin, which contains all the details of methods and practices in the valley, may be had by addressing the Department of Agriculture at Washington, D. C.

Market Outlook for Farm and Ranch Products.

(Continued from Page 5).

part of the winter wheat belt. Threshing has begun in the extreme southwest. Threshing returns in Texas and Oklahoma have been disappointing and trade estimates upon the Oklahoma yield now range around 25,000,000 bushels, compared with the government's forecast of 32,000,000 bushels. Premature ripening from high temperature is reported from Kansas, Missouri and Nebraska. The grain which did not sprout until late winter and which made a sappy growth is most affected. Spring wheat is progressing favorably in most sections and the prospect is one of the best in years, but rains will be needed soon to maintain its condition. The annual black rust scare has been started, but thus far it has not received serious attention.

The Canadian acreage is estimated officially at 22,464,000 acres, or 794,000 acres less than last year. The crop has had a better start this year, however, and the yield may yet exceed that of 1921. The European crop is about up to the average in all countries except France, Germany and Poland, where it is below the average. The Italian crop is estimated at 164,000,000 bushels, compared with a three-year average of 159,000,000 bushels. The acreage seeded for the next harvest in Argentina and Australia is reported to be heavy, but the monsoon in India, an important factor in the planting of the new crop, did not bring the general rains needed.

Undertone in Wheat Improves.

Wheat prices reached a new low point for the season last week, but the market is showing more resistance to pressure and the undertone is more firm.

Mills are supplying their wants without attracting attention and exporters have been indifferent until the last few days, when breaks began to uncover liberal export sales and it is now reported that most of the heavy deliveries at Chicago on May contracts have been placed.

Of the 245,000,000 bushels on hand in the United States on March 1, approximately 35,000,000 bushels were exported in the next three months, 25,000,000 bushels used for seed, and 88,000,000 bushels consumed as flour, or a total disappearance of 148,000,000 bushels, leaving 97,000,000 bushels in all positions on June 1. Consumption and exports during June promise to be about 37,000,000 bushels, leaving a carryover of 60,000,000 bushels if the estimates are correct, compared with an average carryover of 75,000,000 bushels. Due to small exports the decrease below the average is smaller than expected.

The Argentine crop estimate apparently is in for a revision. The export surplus would have been only 92,000,000 bushels, but 87,000,000 bushels have already been shipped since January 1, and the visible supply is 4,000,000 bushels, practically accounting for the entire surplus with no evidence that shipments are going to cease. Private estimates exceed the official by 25,000,000 to 40,000,000 bushels.

Corn Market Ready for Advance.

The corn market is primed for a moderate advance. The after-planting movement has come and gone, heavy feeding operations have cut down farm stocks and the new crop needs rain.

Cash oats prices are the lowest since last fall. Crop reports are mostly unfavorable, with dry weather, weeds, rust and chinch bugs all playing a part. Demand is only fair. The Canadian acreage is placed at 16,934,000 acres, or 16,000 acres less than last year.

The range of cash grain prices follows:

Kansas City: Wheat—No. 3 red, $1.04@1.10; No. 2 hard, $1.08@1.38; No. 3, $1.05@1.39.

Corn—No. 2 mixed, 56@57c; No. 2 yellow, 57@58½c; No. 2 white, 56@57c.

Oats—No. 3, 35@35½c.

Barley, 48@52c.

Hay Prices Weaken.

Few hay buyers are in evidence and only the better grades are wanted, while most of the arrivals are low grades. The markets are generally weak.

Kansas City—Prairie upland No. 1, $10.50@12; No. 2, $9@10; alfalfa, choice $14@14.50; No. 1, $12.50@13.50; standard $10.50@12; No. 2, $8.50@10; No. 1 timothy, $18@19; No. 2, $13.50@16; No. 1 light clover mixed, $17.50@18.50; No. 1 clover mixed, $15@17. Straw, $9@10.

Egg Prices Decline.

Egg prices passed through the most serious decline since the storing season started, but the loss has not been drastic. Storage stocks are of record size and are still accumulating, so that operators are doubtful of selling them advantageously in the coming fall and winter. With much lower prices this year, however, consumption has expanded and the storage stocks, even though large, should be absorbed in due course.

Denver—Eggs, 25@28c. Live poultry—Hens, 19@22c; springs, 35c; broilers, 35c; roosters, 7c. Turkeys, 27c.

Butter Markets Steady.

The butter market has been holding within a limited range for the last month. Receipts increased sharply during the period, but the demand expanded likewise and drastic declines were prevented. With the market showing stability, storage operators have been coming to the conclusion that it will be impossible to buy butter much more cheaply and have been purchasing freely from the June make. Production continues to show an excess over any recent year. Lower scores of butter are becoming more plentiful and are more difficult to move.

Prices on 92-score fresh butter on June 17 were: Chicago, 35¾c; New York, 36c; Philadelphia, 36½c.

Potato Market Weakens.

The potato market has lost some of its recent strength. Shipments are slightly above the average of the last ten months. The supply of old stock is decreasing rapidly and will be practically gone by the middle of July. The crop of early potatoes in the intermediate states is estimated at 20,672 cars of 200 barrels each, an increase of 1,700 cars over last year. New Bliss Triumphs are quoted at $2.75 to $3.25 per 100 pounds, and Irish Cobblers at $4.50 to $6.50 per barrel in middle western consuming markets.

Shorthorn Breeders Hold Annual Sociability Tour.

(Continued from Page 3.)

that he had turned down the request of D. A. Jay, livestock specialist of the extension service of the Colorado Agricultural College, to appear on the program and was going to call on Mrs. Jay instead.

Mrs. Jay Speaks for Women.

Mrs. Jay, who has had the experience of living on a purebred livestock farm, spoke humorously of the expedients of the housewife in taking care of visiting breeders who might drop in at 11:45 most any day, but said one of the fine things about living on a livestock farm was that there were always visitors from far and near coming and they were always such fine folks to meet.

H. C. McKelvie of Nebraska, who was making his first trip to this section with his friend Mr. Ross, a Nebraska Shorthorn breeder, expressed his pleasure at finding so many good cattle in this community. H. A. Ford, representing the agricultural promotion department of the Colorado & Southern and Burlington railroads, told of the plan of replacing scrub bulls with purebreds in a purebred sire campaign which will be conducted in the fall and asked for the support of the Elbert County Shorthorn breeders in supplying some of the young bulls which are to be sold for just what the scrubs bring on the market for bologna. Permission has been obtained from the utility commission to transport the purebred bulls free and haul the scrubs to market free and commission men will sell them free.

Others wso spoke were J. C. Hale, county agent of El Paso county; C. H. Hinman of Bonvue Milking Shorthorn farm, and G. C. Wheeler of Western Farm Life.

County Agent Aichers and Mr. Melburn, who served as general managers of the trip, and all who had any part in conducting it deserve great credit for the smoothness with which the whole program moved along. The members of the association and visitors from outside found the trip most profitable and it will serve to promote an even better spirit of co-operation than now exists in this live Shorthorn community which is doing so much to promote the breeding and developing of better cattle.

Good Fruit Crop in Prospect.

Not for a number of years has Colorado had such promising prospects for large fruit crops of all kinds as this year. The condition of apples June 1 is given by the crop reporting service as 94 per cent of normal, compared with 55 per cent last year and 74 per cent as the ten-year average. This would mean a crop of 3,863,000 bushels. Peaches are 99 per cent of normal in condition, as compared with 72, the ten-year average. The cherry crop is rated as 95 per cent of normal June 1, as compared with 60 per cent last year and 75 per cent in 1919. Prospects are good for large crops of blackberries and strawberries, depending largely on whether growers obtain sufficient water to carry the berries to maturity. In 1919 the census bureau reported the production of 944,000 quarts of strawberries and 2,295,000 quarts as the combined production of blackberries, raspberries and loganberries. The crop this year should be much larger.

General Crop Outlook Good.

On June 1, this year, the moisture condition in Colorado was estimated at 90 per cent of normal, compared with 98.6 per cent last year, and 112 per cent in 1920. From June 1 to June 15, there was but little precipitation and temperatures have been above normal, the moisture content of the soil has not improved and crops are generally reaching the point where rains are needed. In all streams flowing eastward water for direct irrigation is extremely short, and while reservoirs have generally been fairly well filled, it has already (30 to 60 days earlier than usual) been necessary to draw upon them in a limited way. On June 1 Colorado had a conditions of 98.3 per cent of the ten-year average for all crops on this date.

College Buys Well Bred Cattle.

A choice lot of purebred Hereford yearling steers have just been purchased from the Braiden ranch in the San Luis valley by the Colorado Agricultural college for experimental purposes. Prof. E. J. Maynard went down and selected the cattle, cutting out sixty-six for the test work from a bunch of 160. Only sixty are needed for the tests planned, but the extra steers were taken in order to be sure and have ten uniform steers for each lot. For upwards of twenty years purebred bulls have been used on this ranch, many choice sires having been among them. The steers averaged 455 pounds in weight, which is a shrunk weight for things had not been favorable for their making the gains they should have made during the late winter and early spring months. The cattle will be placed on the college range in the foothills where some range improvement grazing contests are under way. Next fall they will go into the fattening tests at the station feed lots.

Smokers Cause Forest Fires.

Twenty per cent of all forest fires started by man in the National Forests of the West during 1921 were caused by careless tobacco smokers, according to figures compiled by the Forest Service, United States Department of Agriculture. The increasing popularity of the National Forests, which were visited last year by more than 5,250,000 motorists, tourists and sportsmen, makes the prevention and control of smokers' fires more and more difficult. To lessen the fire risk, and to set a good example, the forest rangers and other field officers of the Forest Service have very generally pledged themselves not to smoke in the woods in regions and seasons of danger. Some protective organizations hold that since the hazard of fire is inseparable from the use of smoking tobacco, a moral obligation rests on manufacturers or packers of tobacco to enclose fire warning slips with their products.

In Canada, tobacco manufacturers are now enclosing little red fire warning slips in their cigarette packages. Similar insert slips featuring care with fire in the home and in the forest are also being inserted in match boxes by one of the largest match companies and in cartridge packages by a number of the leading small-arms and ammunition manufacturers of the United States.

Sewage Systems at Small Cost.

The belief that the cost of sewerage systems is little in the city, but almost prohibitive in the country is erroneous, according to Farmers' Bulletin 1227, "Sewage and Sewerage of Farm Homes," published by the United States Department of Agriculture.

The bulletin quotes sewerage cost figures for an eastern city and for a farm home in Maryland. In the city mentioned the average home owner pays $355 for sewer connections outside the cellar wall. The Maryland farmer constructed a septic tank which adequately disposed of the sewage from the home of a family of five persons, at a cost of $102.85. The cost of plumbing inside the house is only slightly higher on the farm than in the city.

Bulletin 1227 may be obtained from the United States Department of Agriculture, Washington, D. C. It gives the principles of sanitary sewage disposal and general plans for constructing economical septic tanks and distribution systems.

New Features at State Fair.

Among the absolutely new and intensely interesting features arranged by the state fair officials for the 1922 Colorado State fair, September 25—30, will be competition classes for Shetland, Welsh and Hackney horses. These will include everything in the line of fancy riding, driving and trick work of these interesting breeds of the equine family. Among the events will be single, tandem and four-in-hand driving. Saddle events with all five gaits, and many features of the high school and fancy stunts by these different kinds of little and big animals. Of course, there will be all the usual horse classes as well.

Correction on Elbert Sale.

An error occurred in our report of the Elbert County Shorthorn Breeders' sale. The top bull of the sale was Carnation Lad from the C. A. Melburn herd, selling to Corral Bluff ranch, Colorado Springs, for $210. The top female also was from the Melburn herd, and sold to Dutton & Kendall of Denver for $190.

Dairying and Hog Raising

All letters regarding commercial and technical features of dairy farming and hog production promptly answered. Address all communications to Dairy Department, Western Farm Life, Denver, Colorado.

A bid for the high-speed farrowing record is put in by Otto Engelbrecht of South Dakota on a Poland China sow that farrowed twenty-nine pigs in three litters within a period of ten months. The first litter of eleven pigs was farrowed April 17, 1921. The second litter of nine pigs appeared on August 29, 1921, and the third litter, also nine pigs, was farrowed February 13, 1922.

Association Closes Year's Work.

The Johnstown Cow Testing association completes the year's work with high averages. During the thirty days ending April 30, 1922, 397 cows were tested, ninety-eight of which produced more than 40 pounds of fat in thirty days. The average milk and butterfat per cow for the 397 cows tested was 868.5 pounds and 32.63 pounds, respectively.

The herd which averaged the most butterfat per cow was owned by Whowell & Polley of Johnstown. The average milk and butterfat production per cow was 1,506 pounds and 54.8 pounds respectively, one of the best averages for a large herd ever reported in a Colorado cow testing association.

The highest producing cow in the association was McCanna Pontiac Ada, also owned by Whowell & Polley of Johnstown. In thirty days she produced 107.7 pounds of butterfat from 2,955 pounds of milk.

The herd of seven registered Holsteins owned by James A. Stewart of La Salle produced an average of 51.58 pounds of fat from 1,377.3 pounds of milk, placing them next to the Whowell & Polley herd for production of butterfat and milk per cow for April. Walter Geurkink, tester.

Treating Pigs for Worms.

Keeping pigs free from worms is largely a matter of prevention involving cleanliness about yards and quarters. Pigs become infested with worms from swallowing the eggs of worms discharged by other hogs, and frequent cleaning up and scattering of strong disinfectants will destroy these eggs.

Turpentine is one of the popular worm remedies and may be given to pigs in slop for three successive mornings at the rate of one teaspoon for every 80 pounds of weight in pigs. Another very effective remedy is copperas. This can be dissolved in warm water and mixed with the slop at the rate of one dram for every 100 pounds of weight in pigs and given five successive mornings. Either of these remedies may be repeated as often as necessary. In case there has been much trouble with worms, it is a good plan to give an occasional dose of one of these remedies. It is not safe, however, to give either to pregnant sows.

Keep Feeder Pigs at Home.

A co-operative livestock shipping association in Indiana helps to keep feeder pigs at home instead of sending them to market when they are offered by members for shipment. Farmers who desire feeder pigs inform the manager of their wants, and when pigs of the feeder type are brought in on shipping day all but a few head are kept at home until finished for slaughtering. Only enough are sent to market to determine the prevailing market price. Those retained are sold to farmers desiring them at the central market price less transportation and marketing cost, the usual costs assessed against animals shipped and sold co-operatively.

The idea is a good one and might easily result in cutting out some needless shipping of hogs backwards and forwards between farm to market.

Pig Naturally Clean.

"As dirty as a pig," an expression so commonly used to express extreme filthiness, is a slander on this animal, says Dr. George H. Glover of the Colorado Agricultural college. The pig is as cleanly in its habits as other farm animals if given a chance, and more cleanly in some respects.

Too often the comfort of the swine herd is the last thing to be considered on the farm, but it has been fully demonstrated that hogs will quickly and liberally repay for extra attention given them. Since the profit in feeding hogs depends upon the amount of gain per unit of feed, and since perfect health is necessary to secure the highest possible gains, it is of the utmost importance that suitable conditions for handling hogs should be the first thing to take into consideration.

Vigorous stock, drainage, a pure water supply, feed, suitable runs, shade, buildings, farrowing pens, feeding places, wallows, etc., must all be planned for and the plans systematically executed. Resistance to disease is natural, or it may be acquired. Natural resistance depends very much upon physical vigor. Exposure, poor food, parasites and other things that lower the vitality not only prevent hogs from making satisfactory gains, but lower their resistance to disease as well.

Treating Calf Diphtheria.

I am having a great deal of trouble with my calves. They start to slobber, get sluggish and will not suck. The hair comes off under their lower jaws in a day or so. They lay around most all the time and after six or eight days die.—G. R. P., Park county, Colo.

This is apparently another case of necrotic stomatitis which usually involves the throat and is known as calf diphtheria. The disease is very common in Europe and in the western states of America. It is highly fatal, and the loss in calves is considerable.

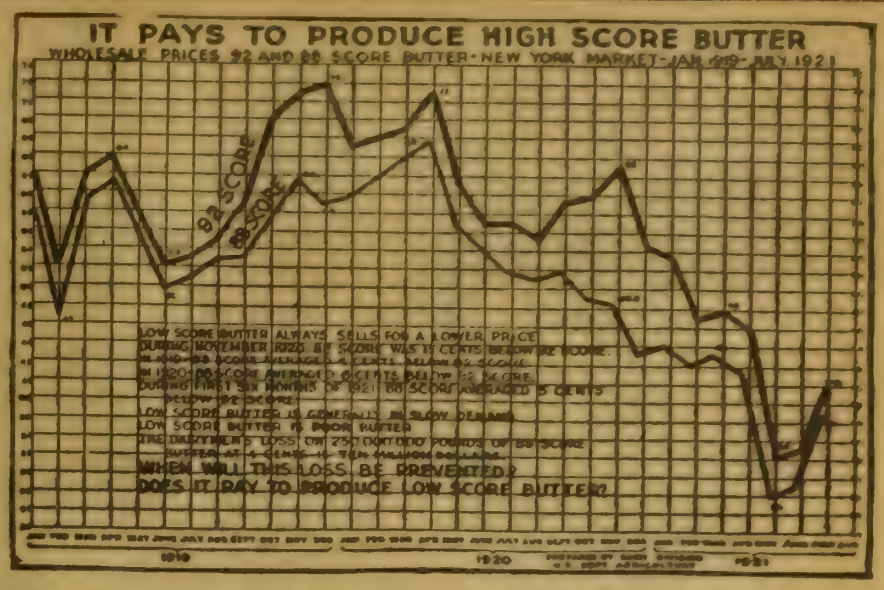
Infection takes place by calves picking up food that is contaminated with the nasal and mouth discharges of diseased calves. The disease is easily transmitted and spreads rapidly from calf to calf. In some instances calves less than a week old become infected.

After death the membranes of the mouth and throat are greatly inflamed. There will be patches of croupous membrance and areas that are covered with a grayish, fetid, cheesy mass. The lungs are liable to be involved and the mucous membrane of the small intestines dotted here and there with caseous deposits. The disease incubates in from three days to a week, after exposure. The first symptoms are a disinclination to suck and a slight increase in temperature. Soon there is drooling from the mouth and protruding of the cheeks. At this time if the mouth is examined, the mucous membrane will show redness and erosion. Soon there will appear patches of grayish yellow pseudomembranes, which cover deep-seated ulcers. These patches vary in size from that of a dime to a silver dollar, and usually quite irregular in outline. Occasionally the disease invades the nasal cavities, causing a sticky discharge which adheres to the nostrils. There is extreme intoxication which is indicated by languor, great weakness, and a high fever.

The disease usually ends in death in from four to seven days. In some cases calves will live for three or four weeks, but in the end will die of pneumonia or some other complication. Occasionally calves recover, but are greatly stunted in growth. If proper treatment is administered, many of these calves can be saved. The healthy calves should be separated from the sick ones and placed in clean quarters. The mouths of healthy calves should be examined once daily for lesions of the disease. If these healthy calves have been exposed, it will be well to disinfect their mouths, twice daily, with a 2 per cent creolin solution. In case of calves that have already manifested symptoms of the disease active measures must be resorted to without delay. The mouths should be washed out several times daily with a 5 per cent boracic acid solution, 3 per cent creolin solution, or some other reliable disinfectant. The croupous membrane should be treated with a paste made of 1 part salicylic acid and 10 parts glycerine, applied with a brush or swab. Lugol's solution of iodine is very effective. Good nursing is an important factor in treating these cases.

The yards, pens, troughs, buckets, and everything that has come in contact with the sick calves should be thoroughly disinfected. Pregnant cows should be taken elsewhere before calving. Prevention is the main thing in controlling this disease.—G. H. G.

An animal is a composite of all his ancestors. Give him at least half a chance by raising him from a registered sire.



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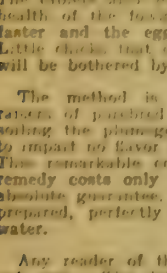

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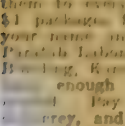

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Any reader of this paper may try them without risk. The laboratories producing Paratabs are so confident of good results that to introduce them to every poultry raiser they offer two big $1 packages for only $1. Send no money, just your name and address—a card will do—to the Paratab Laboratories, Dept. 259, 1100 Coca Cola Building, Kansas City, Mo., and the two $1 packages, enough for 100 gallons of water, will be sent. Pay the postman $1 and postage on delivery, and if you are not delighted with results in 10 days—if your chickens are not healthier, laying more eggs and entirely free from lice and mites—your money will be promptly refunded. Don't hesitate to accept this trial offer as you are fully protected by this guarantee.—Adv.

Profitable Farm Poultry

W. E. VAPLON.

Questions about the farm flock promptly answered by letter. Free advice on all phases of poultry production. Address all inquiries to Poultry Department, Western Farm Life, Denver, Colorado.

Rain-proof, rat-proof and well ventilated poultry equipment will reduce the number of lost chicks.

Lice and mites have a marked effect on the number of chicks raised each year and on the number of eggs laid by the mature hens.

Teach Chicks to Roost.

In raising a large number of chicks in a single brooder house it is often difficult to keep the chickens from piling up at night. This always causes serious loss. To prevent this overcrowding the chickens should be taught to roost as early as possible. A good plan is to make some roosts of one by three inch strips placed so as to provide a three-inch roosting surface. By putting these roosts twelve to fifteen inches from the floor where the chickens are housed for the night, they can soon be taught to go to roost. If they do not take to the roost readily of their own accord, gently place them on these roosts after dark for a few nights until they get the roosting habit.

Improving Colorado Eggs.

It has been said that Colorado eggs are not as good in quality as the eggs produced by the Nebraska and Kansas hens. If there is truth to this statement, the following conditions are probably some of the reasons that account for it:

We find that many of the middle western states have egg candling and marketing laws which are rigidly enforced. All eggs are bought "loss off," or in other words only the good eggs are paid for and must be candled whenever resold. Such conditions have a tendency to improve the quality of eggs marketed as the eggs of poor quality are headed off at the beginning.

Colorado has no candling or marketing laws. Eggs are bought and sold "case count"; that is, the bad eggs are bought and paid for along with the good. Eggs bought this way are not of the best quality, as a few bad eggs in a case affect the grade of the whole package. When eggs are bought "case count," the bad ones instead of being headed off at the beginning, as where there are good candling laws, are not eliminated until they reach the larger distributing points, or even until they reach the consumer. It can be readily seen that the average case of candled "country run" eggs that are shipped into Colorado from Kansas or Nebraska should be of better quality than an average case of uncandled eggs produced by the Colorado hen.

If it is true that the Colorado egg is of poorer quality than those produced in Kansas or Nebraska, it is not the fault of the Colorado hen, but is the fault of the methods of producing and marketing the eggs.—O. C. Ufford, Colorado Agricultural College.

Breaking Up the Broody Hen.

From April to August is the natural period for the development of the brooding instinct in hens, says O. C. Ufford of the Colorado Agricultural college. This is especially true of the medium and heavier breeds, such as the Plymouth Rocks, Wyandottes, Rhode Island Reds, Orpingtons, Brahmas, Cochins, etc. In a great many cases a large portion of the flock becomes broody during the summer and are a nuisance as well as greatly affecting the production of the flock. The poultry raiser can overcome this to a marked degree by giving a little additional care to his flock of laying hens. Break the broody hens not needed for incubation and brooding, and get them back into laying condition at the earliest possible date. Mr. Ufford advises the following methods in caring for the broody hens:

Remove the hens from the laying house at first signs of broodiness, which is a clucking, ruffling of feathers, squakwing at one's approach or remaining on the nest late in the afternoon.

Place the broody hen in a coop with slatted bottom. The coop should be raised off the ground to permit a free circulation of air under it. This reduces the fever or temperature which the broody hen develops and if confined in time she will be quickly broken of her desire to set.

Another good method of breaking broodies is to confine them in a pen with one or several vigorous male birds.

The broody hen should be fed and watered as frequently as the other members of the flock. They will be broken of their broodiness just as quickly and will be in much better condition to start laying than the hen that has been starved.

The broody hens should be removed from the broody coop just as soon as the signs of broodiness are over.

Profit Made by Caponizing.

Much more profit can be made by caponizing cockerels than by selling them for broilers, or stags. Many people believe that this is a very serious operation and that only persons who are skilled in that kind of work can successfully do it. However, this is not the case. With a few lessons any poultry raiser can learn to operate. The first thing to do is to secure a good set of instruments. You will be repaid for the price of them many times by the extra amount of money you make.

The fowls should be cooped up for two and one-half days without food before you operate, so as to have the bowels as empty as possible, as there is danger of cutting into the intestines if they are too full. Place the cockerel on the left side, firmly tie the legs together and fasten them down to the table, then tie the wings together and fasten them down to the table to hold him in position. Clip off the feathers in front of the thigh joint and apply a disinfectant, peroxide of hydrogen is good, or one part of carbolic acid to fifty parts of water may be used. Make an incision one and one-half inches long between the last two ribs. By using the spreader to keep the wound open the testicle may be seen. Slip the wire between the artery and testicle, making a loop, then cut off the testicle. Both testicles must be removed through the same opening. It is a good plan to draw the skin over to one side before you make an incision, so that when you cut into the bird, the opening of the skin and the opening between the ribs will not be at the same place. In this way the intestines are not exposed to the air and disease germs cannot get in so easily.

I have found it a good plan to kill a cockerel before I attempt my first operation, as much valuable information can be obtained in this way. This work should be done as soon as the chicks are old enough to tell the cockerels from pullets.

It pays to caponize even if you want to eat your own chickens and not sell them, as they grow so much larger and the meat has a better flavor as well as being more tender. However, if you wish to sell your capons, they will bring you at least three times as much money as stags. They should be marketed in January or February, as there is usually a shortage of other kinds of poultry on the market at that time of the year. —Mrs. Royal Moon, Idaho.

Culling Flock Increases Profit.

Culling should be continuous throughout the year. Continuous culling should consist of weeding out all sick hens, all poor emaciated hens, and all those which show evidences of non-production. The whole flock should be given a careful and systematic culling at some time during each year. The culls should be sold on the market at once. They should never be sold for breeding stock.

While going over the flock it is always well to band the best layers in order that they may be used for breeding stock. The single, systematic culling produces best results when made in July or August. At this time it is easier to make a fairly close estimate of the relative value of a hen as an egg producer, and to weed out the non-producers than at any other time of the year. Never neglect culling. It may mean the difference between a good profit and a large loss.

Good health and strong constitutional vigor are necessary for high egg production. Good health is indicated by fair condition of flesh. Vigor is shown by an active, alert disposition. A hen in poor health will have a listless, dumpy, emaciated appearance. She may be thin or she may be overly fat.

For further information on culling, write to Extension Service, Agricultural College, Fort Collins, for copy of Bulletin 189-A, "How to Select a Good Flock."

Determining Sex of Ducks.

Not every one knows how to tell the sex of ducks, but it is easy. The female always quacks in a coarse voice; the drake never quacks, but emits a sibilant sound, described by one woman as being "like an old man with brownkeeters." It has a "quack" sound, but is high-pitched and not so loud as the raucous quacking of the hen ducks.

Candle Eggs Before Using.

Do you know how to tell the quality of an egg without breaking the shell? All you need is a pasteboard box with a hole 1¼ inches in diameter, a strong light such as is furnished by a lamp or an electric light bulb, a dark room, and the egg. When the egg is held close against the hole the strong light renders its contents visible and its quality is indicated by the appearance of the yolk, the white and the air space at the blunt end. By comparing the egg with charts furnished by the United States Department of Agriculture in Department Bulletin 51, it is possible to learn the exact condition of an egg before it is broken.

Testing eggs by candling, as it is called, may not only be used by the housewife in obtaining fresh eggs for her table, but has also proved to be commercially practicable in preventing loss by separating for local consumption, eggs that, because of cracks, wetness, incipient spoilage, and other defects, are likely to spoil in shipment. Such eggs are suitable for immediate use, but will not stand shipping.

Candling as near as possible to source of production will not only save transportation and storage charges for the farmers who wish to buy and sell on an accurate quality basis, but will prevent the loss of a valuable food product. This method of conservation was tried out during the World War and the results have been so gratifying that many states have made it a permanent feature of their food-control work.

Department Bulletin 51, which contains these charts, may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., for 40 cents.

MISCELLANEOUS.
(Classified Advertising.)

PATENTS—BOOKLET FREE. HIGHEST REFerences. Best results. Promptness assured. Send model or drawing for examination and opinion. Watson E. Coleman, Patent Attorney, 624 F St., Washington, D. C.

LET US TAN YOUR HIDE—COW AND HORSE hides for fur coats and robes. Cow and steer hides into harness or sole leather. Catalog on request. We repair and remodel worn furs; estimates furnished. The Crosby Frisian Fur Co., Rochester, N. Y.

"THEBESTO ROCKY MOUNTAIN HONEY," none better; satisfaction guaranteed or money back; five-pound can, postpaid $1.50. Send remittance with order. Write for price on large quantities. The Colorado Honey Producers Association, Denver, Colo.

NURSES TRAINING SCHOOL—PARK AVE. HOSpital, Denver, Colo., offers a thorough training to young women desirous of becoming professional nurses. This is a fully accredited school. Course is three years. During training students receive full maintenance, tuition and all uniforms; also money allowance of $6 per month to cover other hospital needs. Apply Supt. of Nurses, Park Ave. and Humboldt Sts., Denver, Colo.

ARMY GOODS.

SALVAGE AND SURPLUS SALE OF ARMY goods. Post Army Store, 921 18th St., Denver, Colo. Write for price list.

SALVAGE AND SURPLUS SALE OF ARMY goods. Denver Army Store, 1443 Larimer st., Denver, Colo. Write for price list.

KODAK FINISHING.

KODAK FINISHING—FOR TRIAL ORDER SEND 25c any size roll six prints. Kase Studio, Neville Block, Omaha, Neb.

FILMS DEVELOPED 5c, PRINTS 2c, POST cards 5c; prize photo free. J. B. Christopherson, Box 1051, Salt Lake City, Utah.

BATTERIES AND SUPPLIES.

WILLARD BATTERIES AND SUPPLIES—WRITE for list and prices. Mile High Specialty Co., 1637 Court Place, Denver, Colo.

RADIO STORAGE BATTERIES AND SUPPLIES. Mile High Specialty Co., 1350 Cherokee St., Denver, Colo. Mail Order Dept.

FRUIT BOXES.

FOR SALE—ALL KINDS OF FRUIT BOXES, barrels, kegs and sacks for all purposes. Colorado Wood Box Mfg. Co., 11th and Market, Denver, Colo.

LARIMER BOX AND BARREL CO.—BARRELS, kegs, fruit packages, baskets of all kinds. 1016 Larimer st. Main 7088. Denver, Colo.

FARM MACHINERY.

CORN HARVESTER — CUTS AND PILES ON harvester or winrows. Man and horse cuts and shocks equal corn binder. Sold in every state. Only $25 with fodder tieing attachment. Testimonials and catalog free, showing picture of harvester. Process Harvester Co., Salina, Kan.

ONE 60—75 HOLT CATERPILLAR TRACTOR with 8-bottom P. & O. 14-inch plow; one 8-bottom 14-inch Case tractor plow; one P. & O. beet cultivator; one Moline bean puller; one Forkner tiller; one concrete mixer. All in good condition. Will sell complete or by piece. Owner does not need. Cash or terms. Address Moreland Ranch, Atwood, Colo.

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Advertisements will be inserted in this department for 7c per word; four or more consecutive insertions, 5c a word each insertion. Remittances can be made by postoffice money order or personal check. Every figure and initial counts as one word. Guaranteed circulation 55,000 copies each issue. Send us a trial advertisement. Write for proof showing how these columns pay advertisers.

POULTRY

LEGHORNS.

S. C. WHITE AND BROWN LEGHORN EGGS, $3.75 per 100, postpaid. Baby chicks, 11c. Jenkins Poultry Farm, Jewell, Kan.

WANTED—THREE DOZEN SINGLE-COMB PUREbred Brown Leghorns, one month or six weeks old. Frank Yelton, 211 N. 18th, Billings, Mont.

1,000 EARLY SPRING WHITE LEGHORN COCKerels from one of the best egg-laying strains in the country, for 75c each, if taken at once. I need the room. Act quickly, as these birds will cost you from $3 to $5 next spring. J. W. Wonderly, Box 358, Pueblo, Colo.

BUFF LEGHORN BABY CHICKS—MY TWELVE years' experience with the Buffs has fully demonstrated to my entire satisfaction that they are just what I call them—Best Layers on Earth. Get in on a good thing and try them. You will never regret it. Champney's Poultry Yards, 2057 So. Broadway, Denver.

ANCONAS.

FINE ANCONA COCKERELS — PRICE, $5. Don't miss one of these birds; heavy laying strain. Lee R. York, Alamogordo, N. Mex.

SPECIAL PRICES—EVERLAY ANCONAS JUNE chicks, $13.50; pullets, cockerels and eggs. Everlay Farm, Hale, Mo.

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WHITE WYANDOTTE EGGS, KEELER STRAIN. $1 per setting of 13 eggs. C. Eklund, Mustang, Colo.

MINORCAS.

FINE SINGLE COMB BLACK MINORCAS—FINE Buff Orpingtons. Fertile eggs, 10 varieties. Baby chicks. Frank A. Agnew, Southside, Omaha, Neb.

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PUREBRED CHICKS, 8c UP; LEADING VARIETIES; postpaid; live delivery guaranteed. Catalog free. Lindstrom Hatchery, Clinton, Mo.

CHICKS, 8c UP; ALL VARIETIES; POSTPAID; guaranteed; prompt shipment. Illustrated chick guide free. Superior Hatcheries, Windsor, Mo.

NINETY BREEDS—POULTRY, EGGS, PIGEONS, dogs, baby chicks, parrots, ferrets, hares. Complete free folder. Bergey's Poultry Farm, Telford, Pa.

CHICKS—WHITE LEGHORNS, 10c; BARRED and White Rocks, 11c; postpaid and 100 per cent live delivery. Younkin's Hatchery, Wakefield, Kan.

SUPERIOR QUALITY BABY CHICKS, S. C. White Leghorns, 13c; S. C. Reds, 15c. Write for circular. Belleview Poultry Ranch, 244 W. Belleview, Box W, Littleton, Colo.

HATCHING EGGS HALF PRICE; SEND FOR free circular; 30 varieties of popular and ornamental poultry, the best in the west. Modlin's Poultry Farm, Rt. 28, Topeka, Kan.

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QUALITY CHICKS—WHITE AND BROWN LEGhorns, $10 per 100. Reds, Rocks and Anconas, $12. White and Buff Wyandottes, $13. Left-overs, $9.50. Live delivery; postpaid. Fleda Jenkins, Jewell, Kan

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DIRECTIONS ON HOW TO RAISE TURKEYS, make them lay 50 eggs or more. Cureing blackhead and what causes it, ridding them of lice, all for $1. Sunnydale Poultry Farm, Keystone, Neb.

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REGISTERED SHORTHORN MILK COWS FOR sale. Reasonable prices. The Lowell Purebred Cattle Co., Union Stock Yards, Denver.

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ORION CHERRY KING 15TH BOARS OUT OF Defender sows will put extra dollars in your hog lot. The price is right. J. O. D. Ranch, Anoya, Colo.

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FIR LUMBER, MILLWORK, RED CEDAR SHINgles, fence posts, from mills to you. Send bill for delivered prices. Lansdown, Box 909M, Everett, Wash.

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MISCELLANEOUS

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Buy MILKING SHORTHORNS

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We can supply your needs in bulls of beef type either horned or polled Shorthorns.

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CHOICE YOUNG BOARS

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Are the big hardy kind that make good under the most trying range conditions. At the head of the herd is

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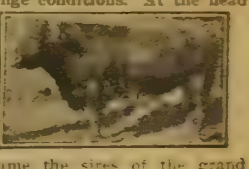

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breeding has proved itself in the show ring. Lord Douglas calves out of Snow King heifers are ever better. We will have some bulls of this breeding for sale this summer.

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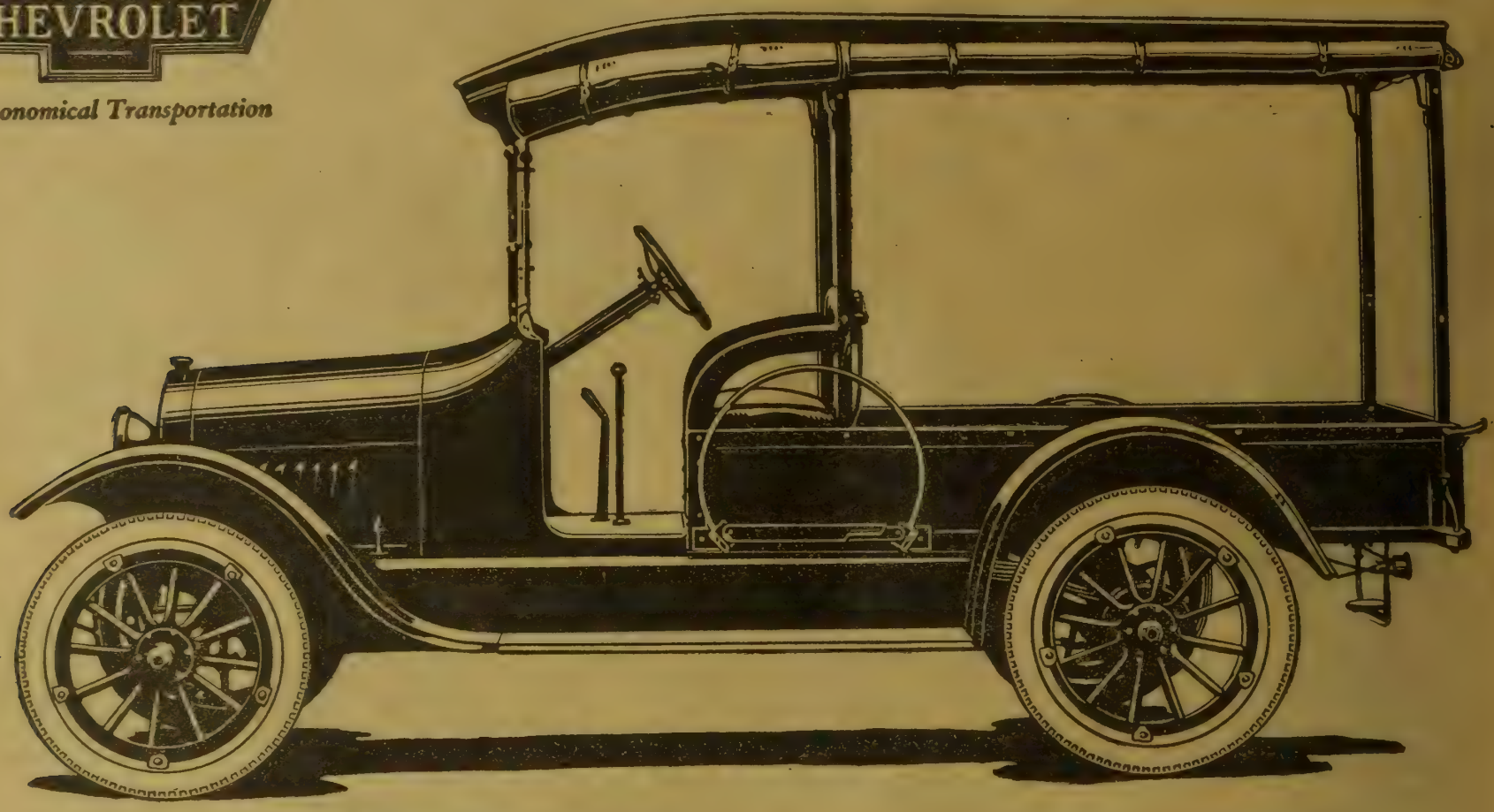

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The Greatest Dollar Value in the Commercial Car Market

Every farm needs this car to carry milk, garden truck, feed and all moderate loads.

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Can be had with special panel body at very reasonable cost.

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Full Weather Protection—Waterproof curtains let down on sides and rear, fully protecting driver and load against rain or snow. Flexible windows in curtains.

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Trees Can Be Grown on Plains Without Irrigation—Page 4

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WESTERN FarmLife

Vol. XXIV. *Denver, Colorado, July 15, 1922.* *Semi-Monthly*

Out of the kitchen by noon!

Recipes for a care-free afternoon and a delicious cold supper.

AN AFTERNOON on the veranda! A motor ride into the country! Visits with congenial friends! These and other alluring prospects beckon to you these warm July days.

"Yes," you say, "If I could only escape the kitchen occasionally."

You can.

A friend of ours did. In the cool of the morning she tried the menu given below. She found that with the help of Crisco its preparation became a sort of lark.

We believe you'll agree, too, when you learn what treats you can make with this pure *vegetable* shortening. See if your family doesn't compliment you on the delicious natural food flavors which Crisco leaves undisguised.

Yes, in bringing out the fine natural flavor of foods you will find Crisco a most helpful partner. And you will find the following facts very important if you wish your summer foods to digest easily.

What Fats do Children digest well?

Doctors unite in this warning: "Carefully select hot weather foods for your children." Speaking particularly of the digestibility of fats, a well-known professor of food chemistry says:

"If the melting point of the fat lies much above the body temperature, the fat will not become sufficiently fluid to be readily emulsified and digested."

Crisco (pure vegetable fat) melts at 97 degrees—which is below body temperature. On the contrary, body temperature cannot melt the majority of animal fats.

Think how easily your own little child will digest vegetable Crisco.

* * *

To assure delightfully uniform yet digestible cakes, pastry and fried foods order a can of Crisco from your grocer now. Today or tomorrow try the recipes given on this page. In welcoming Crisco for your own favorite recipes remember that you use ⅕ less of Crisco than you would of butter or animal fats.

Special Cook Book Offer

This unique book is entitled "The Whys of Cooking." It answers 164 puzzling questions about cooking and serving. Contains 143 delightful recipes. Gives 45 standards for cooking measurements. Illustrated in 4 colors. Written by the famous Janet McKenzie Hill. Simply mail 25c in stamps or coin to Section U-7 Dept. of Home Economics, The Procter & Gamble Co., Cincinnati, Ohio.

Small, medium and large sized cans Crisco is also made and sold in Canada

Quick Nut Bread

3 cupfuls flour
1 teaspoonful salt
3 scant teaspoonfuls baking powder
1½ tablespoonfuls sugar
1 cupful nut meats
1½ cupfuls milk
2 tablespoonfuls melted Crisco
1 egg beaten light

Sift well together first four ingredients. Add the well-beaten egg to the milk, then add the nut meats cut fine, then the two tablespoonfuls melted Crisco. Then mix all together and bake one hour in a moderate oven.

Cherry or Berry Pie

First make a plain pastry from this recipe:

1⅓ cupfuls flour
½ teaspoonful salt
⅓ cupful Crisco
4 to 6 tablespoonfuls cold water
(sufficient for one medium size pie)

With a knife cut Crisco into sifted flour and salt until mixture looks like coarse meal, then add slowly enough ice water to make a paste that cleans the bowl. Take half of dough, roll out on lightly floured board until about ⅛ inch thick. Roll lightly from center outward. Use light motion in handling rolling pin. Line pie pan letting pastry emerge ½ inch over edge. Mix one cup sugar with one teaspoonful flour and a pinch of salt. Mix this thoroughly with fruit. Fill pie pan, add bits of Crisco, moisten edges with cold water. Roll the remaining half of pastry to a thin sheet. Cover the pie. Press edges close together. Trim with knife and a few slits in center. Bake ½ hour in hot oven.

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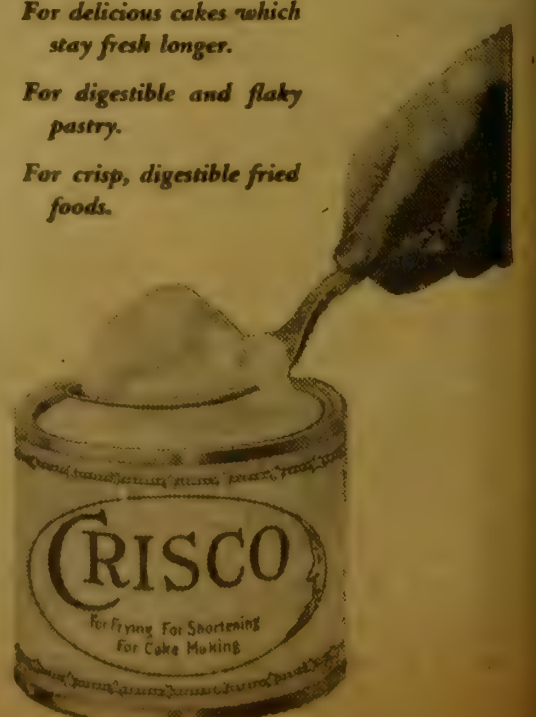
For delicious cakes which stay fresh longer.

For digestible and flaky pastry.

For crisp, digestible fried foods.



Western Farm Life

A Western Magazine for Western Farmers and Stockmen

VOL. XXIV. DENVER, COLORADO, JULY 15, 1922. No. 14.

Plan Now for More and Better Wheat Next Year

LOW QUALITY OF GRAIN PRODUCED CAUSES ENORMOUS LOSSES TO GROWERS

George C. Wheeler.

FROM two to seven bushels more wheat to the acre have come as a result of July plowing as compared with late summer and fall plowing in scores of experiment station tests and on the farms of thousands of successful wheat growers. It is the one thing which can be done without additional labor or cash outlay. It is the early work that counts in seed bed preparation.

Low quality of a portion of the crop causes losses of millions of dollars to the wheat growers of the Southwest. Forty per cent of all the wheat grown in the hard winter wheat area is off in quality.

Poor tillage, inferior and mixed seed, rye, weeds, trash, weevil, smut, exposure to weather, wastage in harvesting and handling, all contribute to this loss.

Increasing acre yields is the most important factor in bringing profit to the wheat grower. Low yields and low grades often result from the same causes.

MORE and more consideration is being given by millers to the quality of wheat they buy for milling purposes. It will become increasingly difficult for the grower having weedy, mixed, smutty, bin or stack burned, or otherwise damaged wheat to sell his crop at anything like the price of good milling wheat. A wheat grower wishing to improve his crop might begin right now with the present crop, says L. A. Fitz, milling expert of the Kansas experiment station. He points out that wheat cut too green or that contains large amounts of green weeds is likely to heat in the stack enough to injure the quality and color of the grain. To avoid this weedy patches can be thrown out and green wheat well distributed through the dry wheat. Musty or bin burned wheat is very objectionable from the milling standpoint.

Mr Fitz sums up the care of wheat after harvest as follows:

Avoid Weather Damage.

"The wheat farmer should be careful in shocking, stacking, threshing and binning. If the wheat stands too long exposed to sun, rain and dew it becomes bleached and sprouted. If it is sacked too wet spoilage and heating are almost sure to occur. Damp wheat will not thresh clean and when binned is very likely to heat and bin burn.

"If from any of these causes the wheat is damaged sufficiently to reduce it from No. 2 to No. 3 grade the discount in price may be from 2 to 4 cents. When the damage is still greater and a No. 4 grade results the penalty may be 10 cents or more per bushel.

"If the grain deteriorates in the shock or stack before being threshed it becomes more difficult to handle and store at the elevator, and the grain buyer is given more argument for further price discounts.

"Cutting as early as possible after wheat is ripe helps to retain the luster of the kernels and in some degrees reduces the appearance of the yellow berry in hard wheat. Continued exposure in the field causes bleach and loss of "bloom." Exposure to heavy rains will cause the kernel to absorb excess moisture and sprout, thereby reducing both quality and test weight.

"Early preparation of the seed bed for next year's crop is essential if the crop is to have the best possible kind and amount of plant food available for its use. The present crop should be removed as soon as possible after harvest and the preparation of the soil for the next year's crop begun.

Strive for Purity of Type.

"A survey of fields every spring in advance of harvest to determine mixtures of other varieties, rye, presence of smut, other plant diseases and noxious weeds will be of great value in improving quality. If only small amounts of rye or different varieties of wheat are found the heads may be clipped off or the plants pulled up. If the mixture is so great as to make this impracticable or if the wheat contains too much disease then plan to obtain good, pure, clean seed, preferably from the same locality for seeding next fall. Farmers who have fields suitable for seed purposes and who have had it inspected can sell their wheat at a premium. Pure, disease-free seed is necessary for wheat improvement."

After producing and properly caring for a good crop of wheat the next step is to know its grade and market value and to insist that it be bought on its merits. The man who by exercise of care and good judgment produces a superior product should receive a premium over his careless neighbor who has only a poor or medium grade of wheat. In other words, it is not enough to have produced a good crop, it must be carefully marketed and that involves knowing market methods and market values.

Preparing for Next Year's Crop.

The necessary steps in getting a better wheat crop next year follow so closely on the operations which may have an effect on the quality of this year's crop that they may well be taken up in the same article. The most important and far-reaching in its effect is early preparation of the seed bed. This is most effective in increasing yields and does not require extra outlay of cash or additional labor.

Average increases in yield per acre ranging from two to seven bushels have resulted from experimental tests at all the experiment stations in the Middle West, as a result of plowing in July as compared with August or September plowing. Thousands of wheat growers have obtained similar results. At the Hays, Kansas, experiment station, which is well toward the west end of the state, the results of a ten-year test gave an average increase of 6.9 bushels to the acre from July plowing. At the Oklahoma experiment station early plowing gave an increase of five bushels to the acre as an average of five years' tests. At North Platte, Nebraska, similar tests covering eight years gave an increase of 1.8 bushels to the acre from early plowing. At the Kansas experiment station at Manhattan, July plowing gave an increase of six bushels to the acre as an average of eleven years, compared with land plowed in September. At Shelbina, Missouri, an average increase of five bushels to the acre resulted from early plowing as compared with late, averaging tests of four years.

Early Preparation Always Counts.

Early preparation has thus given increased yields whether under humid conditions or on the plains with limited rainfall. An average of all the tests given shows an increase of five bushels to the acre as the result of early preparation of the seed bed for wheat. These experimental results should convince the most skeptical as to the advantages of early work in getting ready for a wheat crop. The extra five bushels would pay a goodly part of the expense of growing a crop of wheat. In the strictly plains area where the annual precipitation is not sufficient to ensure a paying crop every year the same principle will hold, for in conserving moisture by summer fallow the early work is necessary. It is a common observation that land which has produced wheat or other small grain followed by a summer crop of weeds is a poor bet as a place to grow a paying crop of wheat the following year.

Early plowing destroys the weeds and saves the moisture and available plant food they would have used if allowed to grow. This accumulation of reserve moisture and available plant food is essential to the production of a crop of wheat under any conditions and most decidedly so under plains conditions.

Listing Good Plains Method.

Early listing has given good results in preparing land for wheat. This method has always given better yields than late plowing wherever tried and at Hays has given better yields than early plowing, or 2.5 bushels more to the acre and 6.5 more than late plowing. Summer fallow at Hays has outyielded early listing three bushels to the acre. In field practice the advantages of listing are usually not so great as in these tests. The principal advantage of listing is that it permits getting over a large creage early and while the land is in condition to stir. It is not necessarily a cheaper method of preparation if the proper amount of work is done and it should be kept in mind that ground listed late in the season is a very poor seed bed for wheat.

Occasionally on the plains ground that has been well plowed may be so mellow and loose that it can be brought to seed bed condition by use of the disk. The stubble and trash catch and hold snow, prevent blowing, and frequently this method produces a good crop when so-called better methods fail. This method of seeding is to be used with discretion, however, and should not be followed many years in succession, and probably not at all except under the most favorable conditions. Growing wheat on the limited rainfall of the plains regions is a matter of storing up the needed moisture and without the moisture the crop is doomed to failure. In some years even the summer fallow may fail to conserve sufficient moisture.

Follow Principles Laid Down by Parsons.

Readers of Western Farm Life cannot do better than to follow closely the principles of successful plains farming as given again and again in the columns of this paper by E. R. Parsons, our expert in this type of farming. The plains farmer who will grasp and make his own the practices recommended by Mr. Parsons cannot fail of at least a moderate degree of success in growing paying crops under plains conditions.

Early preparation is the one factor in improving the next year's wheat crop which we would like to urge as the most important thing that can be done by the wheat grower who would reduce his chances of loss to a minimum. In no other way can the grower hope to obtain an increase of from a fifth to a third in his wheat yield without additional expense. Improved seed and above all early seed bed preparation will improve your crop

Modern machinery important factor in producing wheat crop, but brains and intelligence necessary to best results in obtaining high quality product.

Trees Can Be Grown on Plains Without Irrigation

STORE MOISTURE IN ADVANCE OF PLANTING AND NEVER NEGLECT CULTIVATION

E. R. Parsons.

IN the old days what was it that gave the pioneer farmers of the plains the courage to start farming without irrigation? At that time, before the ranges were over-stocked with cattle, we could go out almost anywhere with our mowers and cut hay in the swales and hollows of the open prairie. In June the wild flowers grew in such profusion as to color the landscape. Shrubs of different varieties were found everywhere, and the railroad tracks were margined with sunflowers often six or eight feet high. Everyone who thought the matter out knew that wherever vegetation grew spontaneously it could be made to grow in a much superior fashion by the arts of man.

It is the same with trees. We find wild fruits and trees of many kinds, including those used for building purposes, growing all over the West in many places where the precipitation falls as low as 8 inches. Is there any doubt whatever as to the possibility of growing trees under a precipitation of 12 or 14 inches with all the advantages of advanced agricultural methods? Most decidedly not; in fact, in many parts of the country not only beautiful groves are flourishing without any irrigation whatever, but many orchards are bearing fruit and doing remarkably well.

Store Moisture in Subsoil.

The raising of trees and crops without irrigation is based on the same principle—the conservation of the natural moisture. Since it is much easier to conserve moisture in the subsoil than in the top soil, it is a comparatively easy matter to grow trees whose roots may go down twenty feet or more. By summer fallowing, or plowing in the early fall, we easily obtain two or three feet of moist soil by planting time in April or May. A tree properly set in such soil and well cultivated cannot dry out whether it rains or not, but a tree potholed in the hard ground without plowing and cultivating has very little chance of surviving, for the moisture escapes and is lost by evaporation.

When the trees are young and planted at the proper distances more moisture will be conserved in the plantation or orchard than they can possibly use up. Thus, for several years after the original planting the soil continues to gain in moisture until after five or six years it may be wet down to a depth of from 7 to 10 feet, according to the precipitation. This large reserve of moisture affords perfect security to the trees as against drouth. Winter-killing is much more of a menace to tree growing than the dry weather, and in selecting varieties for an orchard climatic hardiness is of more importance than drouth resistance.

We cover such a large territory with our magazine that it is impossible to give in detail every variety suited to any particular locality, but this information can be obtained from the colleges, the nearest experiment station and often from the county agent or neighbors.

Good deep soil is the principle requirement for trees, and it is not advisable to plant them on land which has rock or solid hardpan a few feet below the surface. The exposure is more a matter of personal choice than anything else, for orchards and plantations may be found facing in every direction and all doing equally well. In nature, the northern slopes are usually the most heavily wooded.

Order Trees in Fall.

Those who are preparing to plant trees often write to us about March or April of the same year in which they intend to get them out. This is just about a year or nine months too late. The trees should be ordered in the fall from a reliable nursery for delivery in April or the first of May. The first orders get the best trees; the very late ones get what is left. The big nurseries are the best to deal with because they understand their business and have the right plant to take care of their goods. When a tree has been dug and the roots allowed to be exposed to the sun for but an hour or so, it is damaged goods and will be slow to leaf out or may not leaf out at all. This is one reason of much disappointment when planting trees. The best nurseries now ship only in boxes and the roots are never allowed to become dry. Evergreens are so sensitive to root exposure that a ball of dirt must be taken up with them, and the bigger the ball the better. When obtaining them from the mountains, it is a good way to dig a trench around them in the fall and fill it with dead leaves and litter, then dig under the block of frozen dirt around the tree in the early spring, tie it up securely in burlap and plant it without removing the sacking, which will rot in a little while. Nursery evergreens are the easiest to raise because they have more fibrous roots close to the trunk. In the wild state where the soil is poor and moisture scarce, they extend to great distances in search of food.

Keep Roots Moist.

The roots of trees when they arrive at their destination are often drier than they ought to be. When this happens, they should be allowed to stand in water for an hour or two and the tops sprinkled. They can then be heeled in under moist earth until ready to be planted. When setting the trees a sled and a barrel of water is the handiest arrangement with some sacks or an old blanket to cover the roots, which should be sprinkled every once in a while to keep them moist. If the soil is moderately damp no water need be used in the hole, but if otherwise a gallon or so may be poured in the bottom, then the roots and then the dirt. The art of making a tree take hold and sprout quickly is thorough tamping. Plant or tree roots cannot absorb film moisture from the soil granules without tight contact with them. This contact is obtained by the rootlets squeezing between the granules, which, if loose, cannot afford the necessary rigidity. This is of more importance here because there is seldom any free water in the soil as there is further east. A small mound of dirt should first be made in the hole for the crotch of the root to be pressed into, then the rest of the soil filled in gradually, tamping every few shovelfuls, leaving an inch or two of loose dirt on top.

Where to Set Fruit Trees.

We are sometimes asked if fruit trees should be planted over a water table. When the water line is from 6 to 10 feet below the surface, they will do remarkably well, but if the water should rise in times of flood and waterlog the roots for more than a few days, considerable damage might be done. Free water rises by capillarity several feet above the water table, keeping the stratum above permanently moist, but not devoid of air. On such a stratum, the trees are practically subirrigated and get all the moisture they need. The roots of fruit trees and all other upland varieties will go down as far as the water line and then stop, but the roots of cottonwoods, willows, alders, boxelders, etc., can live and thrive in the water itself and are often found at the bottom of wells. Therefore, it is advisable to be careful in this matter and not plant close to a creek or on any bottom likely to be flooded for too long a period, but provided there is a 6 or 8 foot bank to a dry creek, it would be safe to plant on that level owing to the quick drainage. On such a site, the apples should be planted nearest the water, the plums next and the cherries the farthest up the slope. There should be no hesitation, however, about planting any of these without any reference to depth of water for the right methods will bring them through hundreds of feet above any suspicion of subirrigation.

All on Ample Space.

Besides conserving the precipitation in the soil, it is a great help to trees to allow them plenty of room. Their roots extend to great distances from the tree in a very short time and they are thus enabled to benefit from all the water that is absorbed by the square allotted to them and it is evident, therefore, that the bigger the square, the more water for the tree; therefore liberal spacing means a liberal water supply. The French Government owns an enormous olive orchard on the North African coast where the rainfall is only about 10 inches. The secret of their success lies in the fact that these trees are planted 50 feet apart. It is a poor policy to try to raise anything between tree rows, for the reason that where they grow to a large size, they will need all the water that has been conserved. With a 15-inch precipitation, a 40-foot square will receive 60 tons of water a year, of which half to three-quarters may be conserved in the subsoil, so that apple trees, for instance, placed 40 feet apart, may use from 30 to 45 tons a year, which is about what is required by them when they arrive at full grown maturity between 10 and 20 years of age. Plums and cherries should be spaced about 20 feet and small fruits and grapes 10 feet.

Trees for windbreaks should also be given as much room as possible and may be planted closer in the row if more space is allowed between the rows and in order to render good service it is advisable that several rows should be planted so that trees in one may cover the open spaces in the other.

Preparing Land for Planting.

If summer fallowed land is used for planting, then the rows should be run out and the holes dug in the fall. A dead furrow should be made plowing up and down until the center is about 18 inches or 2 feet below the general level, and then the holes dug in this dead furrow using good top soil for filling in when planting. When the plowing is done in the late summer or fall, the lands should be so arranged as to bring the dead furrow where the row is to be. The advantages of this method are that the dead furrow and the holes may fill up with snow in every blizzard, accumulating moisture where it is most needed, and the surface will remain dished towards the trees for several years, throwing the run-off right to their roots. Continual cultivation will eventually level the whole floor of the orchard or plantation.

Trees should be kept well cultivated and no crust allowed to form. Generally speaking, if the land is kept clean of weeds most of the moisture will be conserved, but it is often necessary to cultivate after the July cloudbursts to prevent the soil from baking. In preparing the land for planting, the plowing cannot be too deep, and a good plowing once a year directs the roots downward and leaves the surface easy to cultivate. The disk is the thing to use after severe baking, but when the surface is right to work, the spring-tooth harrow is the best cultivator. For a small orchard no special implements need be used. The work can be done with a plow, the disk, the harrow, or the corn cultivator, as expediency demands.

Adapted Varieties of Trees.

There are many varieties of apples that seem to do well in the semi-arid districts, the Ben Davis, Jonathan, Delicious, Smith's Cider, Wealthy, and others. On our ranch twenty-five miles south of Denver, the Delicious matured the best apples for quality and proved a remarkably strong grower. For early varieties, the Yellow Transparent and Duchess did well, but the trees were not as lasting as some of the late varieties. There are many different kinds of plums that may be grown, but the American crosses do better than the straight European, the best of which is the Lombard, or the Arctic. The Morello, Luda hardy and other cherries of this type are very heavy bearers and some of them should be planted, but the Montmorency is the hardiest and most lasting. Any small fruit may be planted, but only the eastern varieties of grapes. These and the blackberries and raspberries have to be buried in winter. The Cherry currant is larger than any other variety, but is more likely to be wormy.

For upland shade trees we have the Locust, Russian Olive, Black Walnut, Elm, Ash, Catalpa, etc. The Black Locust is best for a windbreak and can be used for fence posts and firewood, can be cut down and comes right up again. It is hard to kill. The Honey Locust is more beautiful and as hardy as any. The Russian Olive does not grow very large, but is quite ornamental and easy to raise. The Catalpa does well only in some locations and needs wind protection.

Among evergreens our choice is the Juniper. It has very handsome foliage, is always green and is found growing in very dry districts. The Yellow Pine will stand a great deal of drouth.

The Red Spruce and even the Blue Spruce will grow on the right kind of soil of a gravelly type such as that of a decomposed granite base fertilized with leaf mold. The Red Cedar is also a good drouth resister and makes a similar growth to the Juniper. The foliage turns to reddish, dusky color in winter and these two make a beautiful contrast. They can also both be used for ornamental hedges which once started and kept clipped back will hold their own in any weather.

When a tree is transplanted, it should always be pruned back. The evergreens may be lightly trimmed by removing a few of their lower branches where they join the trunk. Fruit and shade trees should lose about three-quarters of their branches. A good rule to follow is to cut back the top to match the root.

Clean cultivation essential to successful tree growing on plains.

Sheep Profitable Farm Animals.

Sheep might well be given greater consideration as farm animals. A small farm flock will regularly provide two incomes a year. The lambs are sold in the fall and the wool in the spring, and breeding stock and mutton at all seasons.

Sheep keep the farm clean of weeds and much feed on the farm that otherwise would go to waste, is consumed.

Sheep do not require expensive buildings, as do some other animals. Freedom from moisture and winds is about all the protection they need.

Sheep equalize labor on the farm, requiring least in summer when labor is scarce and high, and most in winter, when labor is usually plentiful and cheap.

Sheep are more economical producers than any other class of domestic meat animals, requiring less food for the production of a pound of gain.

Market Outlook for Farm and Ranch Products

NEW TOP ON FED STEERS; HEAVY HOG RUN, BUT NO PRICE BREAK.

Edited by Glenn G. Hays.

TEXAS has been shipping grass cattle for several weeks and many of the recent arrivals from the cornbelt have been partly finished on pasture, but the main grazing sections will not begin to ship freely for two or three weeks. Kansas and Oklahoma cattle usually get under way around the middle of July, but northwestern range states generally do not start until early August.

New High on Cornfed Steers.

Cornfed steers sold at $10.10 at Chicago last week, a new high point for the year to date.

Butcher cows and heifers of the better grades advanced with steers, but the trend in the next few weeks is apt to be downward on the rank and file of she stock, cutters and canners and bulls.

Cattle Shortage Theory Not Proven.

Cattle shortage theories are hard to substantiate. In the five months ending June 1, the total number of cattle and calves slaughtered at all public stock yards in the United States was 4,727,000 head, compared with 4,487,000 head in the same period of 1921. Last year liquidation was on while this year restocking has been under way, which pointed logically to a decrease in supply for slaughter. Even in May, when prices were advancing, the number of head slaughtered was 1,086,000, compared with 924,000 head last year. Incomplete records for June also indicate a big gain over the same month in 1921. The inference that beef consumption has expanded is inescapable.

Good Feeder Market Assured.

July frequently is the month of lowest prices on stocker and feeder steers. Whether it will prove to be the low point this year can not be told in advance, but it seems doubtful. Those who have good pastures available will be anxious to pick up snaps during the summer and early fall and a rather wide outlet is assured right along.

June Hog Run a Big Affair.

Top hog prices last week again reached $11, which has been the stopping point on numerous upswings during May and June. Receipts at the leading markets were largest since January, so that the June run is still on. Total receipts at Chicago during June were the second largest since 1899 and the supply at other points has been heavy, but there has been nothing like the usual June break in prices.

Average prices during the last few weeks have not reflected accurately the trend of the market as there has been a pronounced decline in quality, due to a big increase in the percentage of packing sows. Weights at most markets are above the average for this season. Packing grades may trend lower, but with lighter receipts due soon the butcher and bacon sorts should advance.

Lamb Prices Slightly Higher.

Continued light receipts of lambs made possible some recovery in the market last week, but another minor deluge started toward the close. The dressed trade was higher as the heavy run during the previous two or three weeks has been absorbed. The range run is starting earlier than expected, as a few Idahoes have arrived already and rather heavy loadings are reported to be made in the first half of July. It is possible that the lowest prices of the season have been passed, as the balance of the native crop will be shipped at a more uniform rate. Western lambs are seldom crowded upon the market when it is overloaded and a broad demand from feeders for the thinner lambs is expected right along.

World's Wheat Carry-Over Below Average.

Tentative estimates of the reserves of old crop wheat above domestic needs on July 1 in the United States, Canada, Argentine and Australia, the four countries which have furnished most of the wheat for export in the last several years, indicate that the total supply is below the average. The United States has about 40,000,000 bushels left, compared with an average of 75,000,000 bushels in the last ten years. Canada on the other hand has about 50,000,000 bushels, compared with an average of 25,000,000 bushels. Australia has approximately 5,000,000, according to recent estimates, against an average of 25,000,000 bushels, and Argentine 30,000,000, against around 20,000,000 bushels. Total holdings are about 125,000,000 bushels, compared with an average of 145,000,000 bushels.

Besides these four countries, India also has a surplus of 55,000,000 bushels for export if her home needs are no greater than the average. But her preceding crop was so far below domestic requirements that invisible supplies undoubtedly were depleted and replenishment of these will cut down the quantity for export. Furthermore, the ban on exports imposed a year ago has not yet been lifted. The record indicates that India has held an average of about 15,000,000 bushels for export on July 1. Even with possible exports from India considered, the world's supply appears to be only equal to the average.

Good Wheat Crop in Prospect.

The government's report on the condition of the winter wheat crop as of July 1 is expected to show a loss and may even fall below the final yield of last year. Private reports average about 40,000,000 bushels below the June 1 estimate. The loss in yield will be partly offset by a gain in the estimated yield of spring wheat, unofficial estimates being about 15,000,000 bushels higher than a month ago. Canada has had heavy rains during the last week and a yield about 10 per cent larger than last year is predicted. Black rust has made its appearance in the Northwest as it does almost invariably at this season of the year, but no serious damage has occurred thus far.

It seems unlikely at the present time that the total yield of both winter and spring wheat will fall below the average of about 800,000,000 bushels.

Strike Threat Improves Demand.

The threatened railroad strike has increased the demand for cash wheat during the last few days. Mills have been buying back some of the wheat disposed of during May and exporters have been accumulating to fill sales for July shipment. British interests were reported in the last few days to be reselling wheat for August shipment.

Oats Crop Reports Doleful.

Although the oats crop is fairly good in some sections, most reports are unfavorable from Illinois, Iowa, Nebraska, Missouri, Ohio and Indiana, which are the chief surplus states. Oats prices have responded to some extent to the poor outlook but demand is not exceptional.

The corn crop prospect appears to be slightly less than the initial estimates last year. Exporters have been buying a good deal of corn recently and prices have been stronger than for other grains.

The range of cash grain prices follows:

Kansas City—Wheat, No. 2 hard, $1.08@1.42; No. 3 hard, $1.08@1.40.

Corn—No. 2 yellow, 60@62c; No. 2 white, 57½@58½c.

Oats—No. 3 white, 37½@38½c.

Hay Markets Heavy.

Only timothy hay is selling to good advantage at present. Unless the dry area spreads the trend is likely to be slightly downward until the movement of new hay has been fully discounted.

Prices per ton in carlots:

Kansas City—Prairie upland No. 1, $13@14; No. 2, $11@12.50; alfalfa, choice, $16.50@17; No. 1, $15@16; standard, $16.50@17; No. 2, $11@12.50; No. 1 timothy, $15@16.50; No. 2, $11.50@12.50; No. 1 light clover mixed, $14.50@15.50; No. 1 clover mixed, $8.50@10; straw, $9@10.

Egg Market Steady.

The egg market has become fairly stable again after the recent decline. Receipts at the leading cities have decreased 35 per cent or more from the high point of the season late in April and early in May, but there is still a surplus to be placed in storage, and such accumulations generally continue until August. Cool weather will help to maintain production during the summer, but under the most favorable conditions the supply is sure to decrease in the next sixty days and prices on fresh eggs should take an upward trend before long.

Receipts of dressed poultry at the four leading markets since January 1 amount to 90,669,188 pounds, compared with 78,665,643 pounds to the same date last year. Current arrivals are not sufficient to supply the entire demand, however, and cold storage holdings are being reduced.

Latest quotations: Denver—Eggs, 20@27c. Live poultry—Hens, 19@22c; springs, 35c; broilers, 36@38c; roosters, 7c; turkeys, 27c.

Butter Market Weakens.

The butter market reacted moderately from the extreme levels reached a week ago, when the order for low grades for export was being filled. Receipts are falling off in spite of the attraction of relatively high prices, confirming the general belief that the peak of the flush period has been passed. The supply is enough heavier than last year, however, to cut down steadily the shortage in cold storage holdings compared with a year ago. The net movement into storage continues at the rate of about 1,000,000 pounds daily. Minor declines can be expected from time to time, but within a few weeks an upward trend should begin.

Prices on 92-score fresh butter on July 3 were: Chicago, 36c; New York, 38c; Boston, 38c; Philadelphia, 38c.

Potato Prices Lower.

Potato prices declined last week and the trend still appears to be downward. Receipts are slightly above the average for this time of the year and a relatively heavy supply looks probable right along. Old potatoes now compose only about 10 per cent of arrivals. New stock is coming from states as far north as Kansas. Bliss Triumphs No. 1 are quoted at $2.65 to $2.95 per 100 pounds sacked, with Irish Cobblers at $3.85 to $4.24 per barrel in Middle Western consuming markets.

Recent Range of Livestock Prices at Our Principal Markets.

Cattle—	Denver.	Kansas City.	Omaha.
Choice and prime heavy steers (1100 lb. up).	$.....	$9.00@ 9.75	$9.00@ 9.75
Good heavy steers	8.00@ 9.00	8.30@ 9.25	8.50@ 9.15
Common heavy steers	6.25@ 7.35	6.65@ 7.75	7.25@ 7.85
Good light steers	8.00@ 9.10	8.15@ 9.10	8.25@ 9.00
Common to choice butcher heifers	4.75@ 8.00	5.00@ 8.40	5.25@ 8.25
Common to choice butcher cows	3.50@ 7.25	3.75@ 6.40	4.00@ 7.00
Bologna and beef bulls	2.50@ 5.00	3.50@ 5.60	3.50@ 5.75
Canners and cutters, cows and heifers	2.00@ 3.25	2.15@ 3.85	2.25@ 4.00
Canner Steers	3.00@ 4.00	3.25@ 4.50	3.00@ 4.25
Common to choice feeders (1000 lb. up)	5.50@ 7.00	6.00@ 8.00	5.75@ 8.00
Common to choice stocker steers	5.50@ 7.00	6.10@ 8.00	5.75@ 7.85
Common to choice stocker cows and heifers.	3.00@ 5.00	3.10@ 6.00	3.75@ 6.00
Hogs—			
Top of Market	$ 10.20	$ 10.65	$ 10.40
Bulk of Sales	10.00	9.90@10.60	9.00@10.25
Heavy (250 lb. up)	9.50@10.10	9.85@10.45	9.50@10.15
Medium (200—250 lbs.)	9.50@10.20	10.20@10.60	9.85@10.35
Light (150—200 lb.)	9.85@10.10	10.15@10.65	10.10@10.40
Smooth packing sows (250 lb. up)	8.00@ 8.25	8.50@ 8.75	8.50@ 9.25
Stock pigs	9.25@ 9.75	9.75@10.60	9.25@10.00

Club Members Fascinated by Radio

BOYS RESPONSIBLE FOR RAPID DEVELOPMENT OF WIRELESS TELEPHONY.

Alvin T. Steinel.

A GROUP of eager boys are gathered in the living room of a farm house, each equipped with a pad and pencil. A buzzer is spluttering strange sounds which the boys are recording. Here they came, from the buzzer in the hands of the leader: Dash, dot, dash, dot; dash, dash dash; dash, dot; dash, dot,dot; dot; dash, dot; dot, dot, dot; dot; dot, dash, dot.

"What have you got boys?" asks the leader.

"Condenser!" shouts a little fellow whose auburn pompadour and bright snapping eyes indicating an alert mentality. Several others in the group joined in with:

"That's what we got too." Another said: "I got all but two letters." And so the lesson went on.

It was a meeting of the Valmont Radio club at the home of Richard Sammons, whose son, Floyd, has a receiving set around which center the activities of one of the first five Radio clubs organized in the west, all of them in Boulder county, Colorado. The Valmont club is particularly fortunate in having as its leader Don Goodheart, a Boulder telegrapher and radio expert, whose practical method of teaching is developing his group of fourteen or fifteen boys into real radio operators.

Total Membership is Seventy.

Boulder county's five clubs have a total membership of 70. Josephine Lee Ferguson, County Club agent, had invited Assistant State Leader W. R. Freeman, I. G. Kinghorn, Editor of Publications; Dick Jay, Livestock Extension Specialist, and the writer, to attend the Valmont club to "see how it works."

The experience was a novel one for most of the party. Floyd Sammons has two sets of receivers and the head pieces were never idle throughout a delightful evening, during which music and voice came clearly from the Denver broadcasting stations. Far distant points are often picked up by Floyd Sammons' set. Dallas, Tex., as well as Pacific Coast points having been heard. The livestock market reports come daily from Denver, as does also the United States Weather report.

Richard Sammons told the visitors that, since January, when the set was installed, his son had gone to town for amusement only one evening. He found not only constant pleasure in working with his radio outfit, but it is proving of great educational value to all the boys in the group.

Officers of Valmont Club.

Waldo Polzin, Route 1, Boulder, is president of the Valmont club, and Carl Travis, Route 2, Boulder, is secretary. Meetings are held every Friday evening and usually some of the older folks call to "listen in" and give attention to the lesson. Every club member either has a receiving set or is making one; that is, making such parts as can be put together by the ingenuity of a bright boy who studies the subject.

The lesson on the evening of April 14 was on the Morse code. The boys had memorized most of the code and their leader was ticking off the dots and dashes in a test to see how many words they could spell.

Other clubs in Boulder county are located at Hygiene, Longmont, Burlington district, and Louisville.

Won Back a Club Member.

Just to illustrate how "radio" appeals to the youthful imagination, Mrs. Ferguson, the county club agent, related an incident of a Boulder county boy who, for some reason, had lost interest in all club work. She tried every possible way to again get him interested as he had done so well, but he remained unmoved. One day she was passing his home on her way back from Denver and she decided to play her last card. It proved a trump.

"John," she said to the boy, "do you know what I've got in my car?"

He shook his head, (Turn to Page 12)

FAST THRESHING—AND GOODYEAR BELTS

When he thinks of the belt troubles he put up with before he got his Goodyear Klingtite Belt, George F. Gerk, of Hillsboro, North Dakota, says he sometimes wonders how he ever got his threshing done.

Those ordinary belts—he tried many kinds of them—slipped and lost power, had to be limbered up every morning. They were short-lived, expensive and bothersome.

His Goodyear Klingtite Belt holds the pulleys in the slipless grip of its friction surface, works just the same one day as another, and distributes the load evenly. It requires no dressing, eliminates engine resetting, and needs no breaking in.

Goodyear Klingtite Belts are reliable, trouble-free and economical; they are made in endless type for threshing, silo-filling, feed-grinding, wood-cutting and other heavy duty, and in suitable lengths for lighter drives, like churning, cream separating, water pumping, wash machine and electric light plant drives.

They are sold by Goodyear Dealers everywhere and by many progressive hardware merchants. For further information about them, write to Goodyear, Akron, Ohio, or Los Angeles, California.

GOODYEAR

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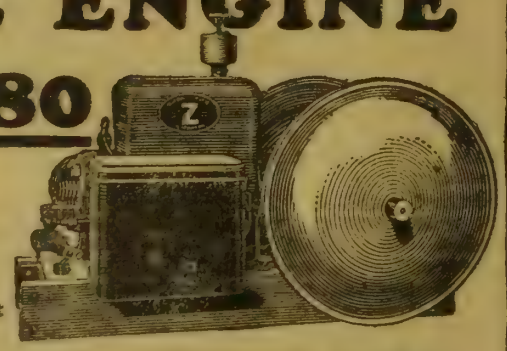

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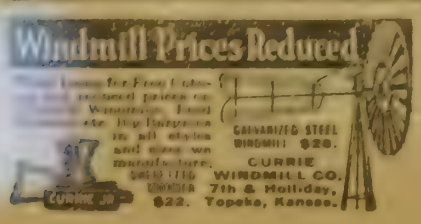

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Finds Tractor Profitable.

A 10-20 three-plow tractor I find very serviceable and best adapted for my needs for the following reasons:

First—During the fall and winter months the tractor furnishes just the proper amount of power to run my hay baler. I am not using a lot of reserve power which though useless would burn up considerable fuel were the tractor too large.

Second—Last fall the threshing machine owners charged from 9 to 13 cents a bushel for threshing the grain. Two neighbors and myself invested in a 22-36 thresher. We found the 10-20 tractor handled the machine easily, threshing from 600 to 750 bushels a day, which is the capacity of the machine. We were thus enabled to thresh whenever we got ready. We also threshed for some of the other neighbors, making a little cash on the side.

Third—At home in the field I can pull three plows, plowing about five acres a day. The 10-20 also will pull my tandem disk. It also is capable of pulling my harrow and float, at one operation leaving my ground ready for seeding.

Fourth—The tractor furnished the proper amount of power for operating a size 12 feed grinder. I have ground 100 bushel an hour at very small expense.

Summing up, I think it advisable to buy a tractor in the fall. During this season there is always plenty of work for it to perform. When the work becomes slack I can utilize the power in my tractor by helping my neighbors grind feed or fill silos. A neighbor and I also own a hay baler which is kept going during the winter. These various jobs provide work for the owner of a tractor which he is enabled to turn into a profit for himself besides keeping the tractor busy instead of permitting it to sit around in a fence corner rusting away.—Raymond McGowan, Weld county, Colo.

Horsemen Stage Endurance Ride.

An endurance ride covering approximately 300 miles will be conducted August 1 to 6 by the Colorado Springs Endurance Ride association. The first prize is the Broadmoor Cup, blue ribbon, Arabian Horse club medal, and $600 in cash. There are other prizes on down to sixth. The object of this endurance ride is to stimulate interest in the breeding, care and use of good saddle horses of a general utility type. It has the approval of the Chief of the Army Remount Service, and the Chief of the Bureau of Animal Industry of the United States Department of Agriculture. The American Remount association has seven stallions standing in Colorado. This association is offering liberal prizes at the Broadmoor Horse Show to be held in Colorado Springs, July 2, on mares bred to remount stallions during the seasons of 1921 and 1922, and on foals born from a remount stallion. Full conditions of the endurance ride can be obtained from C. M. Dammers, Broadmoor Hotel, Colorado Springs, Colo.

Killing Striped Cucumber Beetle.

Nicotine sulphate, when applied in a mixture with a dust, has been found by the Bureau of Entomology of the United States Department of Agriculture to protect young cucumbers, melons, and related crops successfully from the ravages of the striped cucumber beetle. Department Circular 224, "Nicotine Dust for Control of the Striped Cucumber Beetle," by W. H. White, scientific assistant in truck-crop insect investigations, recently issued, gives the results of various experiments at Arlington Farms and directions for preparing and applying the dust.

A dust mixture containing 4 per cent nicotine proved as effective as those containing greater amounts, and is therefore recommended. One-fourth to one-half an ounce to the hill is effective for one application. The dust acts as a repellent and also kills the beetles when they come into contact with it. When applied properly it drives the insects from the cracks in the soil at the base of the plants, and so prevents serious injury.

A duster that will throw a good volume of dust quickly and forcibly to prevent the beetle from escaping by flight should be used. A cheesecloth sack or knapsack-bellows type of duster is effective on small areas. The dust must be applied as soon as the plants appear above the ground, so that they are well covered. The insect makes its appearance suddenly and in large numbers and serious damage may result if this application is neglected. The number of applications will depend on the abundance of the beetles and on weather conditions. The period when there is danger of injury in the District of Columbia and its vicinity is about three weeks.

Department Circular 224 may be obtained free upon application to the United States Department of Agriculture, Washington, D. C.

Prevent Clogging of Head-Gates.

Use a screen or lattice—preferably of metal, so it will sink—which is about four times as long as the depth of the ditch. Rest one end on a pole laid across the ditch over the water, a foot or more from the head-gate, and sink the other end to the bottom of the ditch up stream. All trash, whether near the bottom or floating on top of the water will be forced by the current up the inclined screen, leaving a clean passage below for the water. A screen thus set will not clog with leaves or other trash.

In case a ditch heads in a large stream, subject to freshets which bring down heavy driftwood, it is a good plan to use a coarse screen above the lighter one, made of strong logs or sawed stuff say 4x10 inches set on edge so as to supply a maximum of strength with a minimum of obstruction to the passage of the water. If properly sloped, these screens will not wash away, as the drift does not push against them, but rides up on them and holds them down in place.—J. H. Freeman, C. E.

Sweet Clover Makes Good Hay.

Farmers in the non-irrigated sections who have no bottom land with an underflow on which alfalfa may be grown, will be interested in the experience reported to the Illinois College of Agriculture from a county extension agent who says: "Sweet clover is becoming a valuable crop in the county. More sweet clover was sown this year than in the past ten years. The results obtained from pasturing and the value as fertilizer has been the direct cause of the increased acreage. The winter killing of alfalfa, especially the old seeding, will cause many farmers to cut sweet clover for hay. In 1921 several farmers cut sweet clover for hay and reported that the dairy herd produced as economically as when fed on alfalfa hay."

Big Yield on Summer Fallow.

Forty bushels of wheat per acre on land that had practically no moisture from August 14 until April 24, is the yield which Albert Weaver of Bird City, Kan., predicts for some of his summer tilled fields. Mr. Weaver and his son have 4,000 acres of wheat in Cheyenne county, half of it on summer tilled ground. Five hundred acres is on new sod and the rest mostly on second year summer tilled fields. From the 4,000 acres Mr. Weaver expects 100,000 bushels of grain.

The average condition of winter wheat in Cheyenne county, the northwest county of the state, is about 90 per cent normal, and much of the wheat that is left standing is thin and liable to damage from weed growth.

Mr. Weaver is a firm believer in summer tillage for plains conditions.

Co-Operative Marketing of Potatoes in San Luis Valley.

Five local potato marketing associations co-operated in marketing the 1921-1922 potato crop in the San Luis Valley of Colorado, according to a report by W. F. Heppe, extension agent in marketing, Colorado Agricultural College. Approximately one thousand carloads of potatoes were shipped during the season with an estimated saving to the shippers of ten to twenty-five cents per hundred weight sack. Each car of potatoes was certified to by the inspection service of the State Division of Marketing, Fort Collins. Four of these local associations were organized on the non-stock, non-profit plan, the fifth being a capital stock organization.

If you have leaks around spark plugs try putting a copper washer on the plug and screwing it into the cylinder head solidly. This should prevent leakage and consequent loss of compression. Sometimes, however, these washers do not overcome the difficulty or are not available. Then a little paste stove blacking put on the threads of the plugs might be tried. Just enough of the paste should be used to cover the threads lightly. Many motors fail to give efficient service because of leaks around spark plugs. Oftentimes a motor will have leaky spark plugs and the driver will not know it. A little oil squirted around the plug while the motor is running will reveal leakage.

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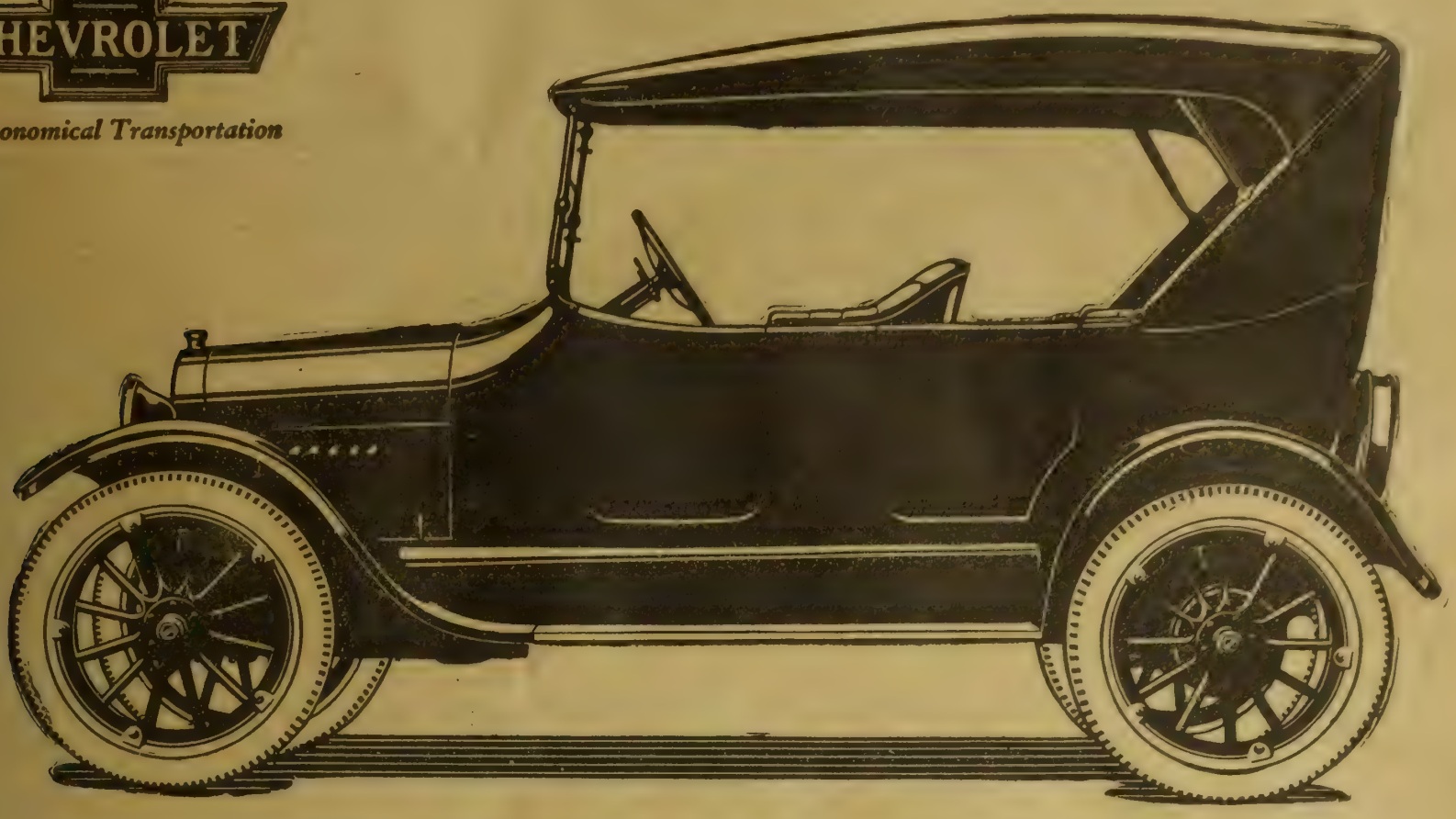

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Colorado at National Holstein Sale.

Colorado has made a most excellent showing in the National Holstein sale held in connection with the thirty-seventh annual convention of the Holstein-Friesian Association of America at Kansas City last month. It ranked fifth in the average price received for the animals sold, or an average of $459 for the state's quota of eight head. Missouri lead with an average of $688 on nine head. The highest priced Colorado animal was the bull consigned by James Gibson of Morrison selling to the Modern Woodmen Sanitarium at Colorado Springs for $850. Hall Brothers of Denver sold two animals at an average of $635. In prices paid for animals purchased Colorado headed the list of states, paying an average of $642 for the five taken by Colorado buyers.

The 148 animals from fourteen states averaged $469, and the top was $3,200. Among the headliners of the sale was the great Kansas milk champion, Genista Knoll De Kol, with a butter record of 1,069.38 pounds in one year. This cow was consigned by the Mulvane Holstein Breeders' Club of Mulvane, Kan., and despite her advanced age brought $1,000.

For the first time this convention was conducted under the delegate system instead of the proxy system. Nearly a hundred delegates from twenty-five states were present. The bitterness and friction which has characterized previous meetings under the proxy system were noticeably absent, although there was plenty of sharp discussion and differences of opinion among the delegates.

In the matter of transfer fees, after numerous plans had been proposed and discussed, a substitute motion by John B. Irwin was passed. This provided for a fee of $1.50 for members and a $3 fee for non-members when application is made within three months after sale. After this limit it is $3 for members and $6 for non-members. Fifty cents of each transfer fee is to go into a fund for extension work through the state associations, to be equitably apportioned by the board of directors to such states as in their judgment will best promote the interests of the breed.

One of the important acts of the progressive factor which controlled the convention was the passing of an amendment to the constitution, "that at each annual convention there shall be elected a president, and a vice president, each for a term of one year, and four directors to serve for a term of four years. All other officers shall be elected, their terms of office, and compensation fixed, by the board of directors." Frank O. Lowden of Illinois was re-elected president.

Adequate Highway Program Urged.

In its final report the Joint Commission of Agricultural Inquiry will recommend that Congress continue to promote an adequate program of highway construction and maintenance; that the progress of highway construction and maintenance be continued under the direction of qualified experts, with particular reference to the construction and maintenance of farm-to-market roads; that the several states cooperate in effecting a uniform basis for taxing motor trucks and other motor vehicles, which shall fairly represent the proportion of expense of highway construction chargeable to such vehicles.

The report shows that in 1918 the estimated cost of hauling in wagons from farms to shipping point averaged about 30 cents per ton mile for wheat, 33 cents for corn, and 48 cents for cotton. Hauling in motor truck or by tractors the averages are 15 cents for wheat and corn, and 18 cents for cotton. In the same year wagon hauling averaged nine miles from farm to shipping point and motor truck hauls 11.3 miles; the motor truck averaged 3.4 round trips per day over its longer route, while wagons made 1.2 round trips per day.

The commission believes there should be regulation of the use of the highways, especially with respect to overloading and maximum loading to be based upon the facts developed. It will also urge that since poor highways not only increase the cost of transportation of commodities from farm to market, but also affect the comfort of the farmer and prevent him and his family from a full enjoyment of communication with his neighbor, all highways wherever possible should be improved and adequately maintained.

Farm Bureaus Boost Purebred Sires.

Farm bureaus in the counties along the lines of the Burlington and Colorado & Southern railroads are urged to use to the fullest extent the opportunity to obtain purebred sires for their members by cooperating in the plan being put into operation. A special train is to be run over these lines this fall carrying young purebred sires of standard breeds of cattle and hogs, which will be traded to farmers for scrub sires that have been in use this season. These scrub sires will be shipped in car lots and sold to the packers. The purebred sires will be donated by livestock breeders of the state and assembled in Denver. The returns from the scrub sires sold will go to the breeders who donated the purebred sires, thus the trade will be made without any expense or obligation on the part of the farmers.

The Colorado Agricultural College through its extension service and animal husbandry division is giving effective support, as are also the purebred livestock breeders of the state. The county farm bureaus can perform a decided service to their members by creating interest in and arranging the local details of this plan.

County Exhibits at State Fair.

County exhibits have been among the most interesting and instructive features of the Colorado State Fair. Unusual interest is being taken in these exhibits this year. The State Fair management has prepared a map of the state showing the counties that have so far signified their intentions of making exhibits this year. On the map each of these counties is shown with a man throwing his hat into the ring which surrounds the State Fair at Pueblo. "Is your hat in the ring?" is the thought suggested and counties not now entered are urged to do so at once and begin preparing for the exhibit. The number already entered is by far the largest showing ever made at the State Fair and without doubt many more counties will enter before the closing date. A big agricultural fair is a most important educational institution and these county exhibits enable various localities of the state to visualize in a very effective manner their varied resources. In addition to the special county exhibits the counties entered will have individual and organization exhibits. The date of the fair this year is September 25—30.

Stockmen Pay Association Fees Willingly.

Little or no opposition seems to be developing to the collection by commission men of the fees for the benefit of the Colorado Stock Growers' Association. The sum of fifty cents a car is being deducted from each shipper's account for the benefit of the state association. Five cents of this fee will go to the National Stock and Meat board, to be used in its advertising campaign to increase the consumption of meat. All buyers of stock on the Denver market are to contribute five cents a car to this campaign fund. There are many things which an active stock association can do with sufficient funds. Stockmen will greatly benefit by the increased activities of the organization. There is no compulsion about this collection, for any shipper can have his money refunded on request. We do not believe, however, that any thinking stockman can object to contributing to his share of what it requires for his organization to do effective work in the interests of its members.

Holstein Breeders to Meet.

Holstein breeders of Colorado will meet for their annual summer picnic August 3 at Monument Valley park in Colorado Springs. The program will include an address by W. S. Partridge of Holly, president of the Colorado Holstein Breeders' Association, a report by Arthur Ponsford of Denver, who was a delegate from Colorado to the national convention of the Holstein Association of America at Kansas City, last month, and addresses by Professor George E. Morton, State Dairy Commissioner; E. E. Murphy of Leavenworth, Kansas, and others. Among the amusement features will be potato and egg races and other sports.

It is of the greatest importance to Holstein breeders of the state that this annual get-together meeting be well attended. C. F. Louderback, chairman of the committee in charge of the gathering, points out that one of the things that impressed him at the Kansas City convention and sale was the size and scale of the Colorado cattle as compared with those from eastern and northern states. If this section is to impress itself upon the country as a center where cattle of such outstanding merit are to be obtained there must be organization and united effort on the part of the breeders of the state. This summer picnic meeting is an excellent opportunity for getting together over the well filled lunch baskets and talking Holstein cattle.

The committee appointed at the last annual meeting to revise the by-laws and constitution of the state association will be ready to report at this meeting. This is a most important matter of business.

Growers Responsible for Quality.

In co-operative selling of products each grower has a personal responsibility. It is his business to see that his products are of good quality and properly loaded. These matters should not be checked up entirely by the inspectors and loaders. These men may have careful instructions, but after all the final responsibility rests on the members of the organization. The Colorado Cabbage Exchange is about to begin the marketing of cabbage for its members and is reminding them that three growers may haul first-class cabbage to a car and a fourth manage to get in some poor stuff and damage the whole car. In addition the reputation of the organization for selling nothing but high quality products is injured. This hurts more than the lower price this particular car brings.

A producer joining a co-operative selling organization cannot wash his hands of responsibility as to the quality of the products and the standing of his organization. It is just as much his business to see that the products are properly graded and loaded as it is to produce them. Unless he does his part the inspectors and loaders are helpless. If anything wrong is observed it should be reported to the proper person at once. Only by each and every member accepting his share of the responsibility can a co-operative exchange maintain the standard of its products.

The Path of Progress.

A human interest story reading like a novel has just been put out by one of the big manufacturers of farm machinery as a new departure in promotion advertising. Practically all the advertising of new equipment and particularly motor farming machinery has made its entire appeal on the basis of design and construction. In this little booklet, entitled "The Path of Progress," the human side of developing a farm and home through the introduction of tractors, trucks, electric lights, silos, and purebred stock is brought out. It makes its appeal by showing how increased pleasure and profit came to a family through the use of modern machinery and modern methods. The little story has in it much food for thought and is well worth reading. The Avery Company of Peoria, Ill., the publishers, will be very glad to send a copy of the little pamphlet free to anyone who may care for it.

Reports from Baca county indicate that the wheat fields of the county are practically free from smut this year. This is a most creditable showing, for last year there were few sections which did not suffer damage from smut. This condition can be attributed to the fact that last fall nearly all the seed wheat was treated for smut before sowing. Farmers who treat their seed regularly every year whether they have smut or not, always have clean fields.

Congress has sanctioned an additional appropriation for barbery eradication, which means that rust damage to grain crops will, in time, be eliminated.

From the Nation's Capital

AGRICULTURAL BLOC DETERMINED THAT FARMERS SHALL HAVE TARIFF PROTECTION.

E. E. Reynolds.

THE Senate is slowly debating its way through the agricultural tariff schedules. The only accomplishment of one entire day's session was the insertion of a comma in an amendment.

The agricultural schedules are going through practically as reported out by the Senate Finance Committee. In some instances they are increased on the floor, and in numerous cases they are above the House bill. Strong support is being given them by the agricultural tariff bloc senators who are having their way in the matter of the tariff on agricultural products.

The meat schedules are higher than those in the Fordney bill. The rate is 1½ cents a pound on live cattle weighing less than 1,050 pounds, and 2 cents a pound on such cattle weighing more than that amount; 3½ cents on fresh beef and veal; $2 a head on sheep and goats; 2½ cents a pound on fresh mutton and goat meat, and 5 cents on lamb; 2 cents on bacon, hams, shoulders and other pork, and 5 cents a pound on lard compounds and lard substitutes.

The tariff on fresh milk was raised to 2½ cents a gallon; cream, 22½ cents a gallon; poultry, alive, 3 cents a pound; dressed, 8 cents a pound; honey, 3 cents a pound.

A duty of 20 cents a bushel was placed on corn; 15 cents on oats; 15 cents on rye; and 20 cents on barley.

A small minority group of Eastern and Southern senators are taking advantage of the situation to point out the alleged direful effect upon the consumer's pocketbook of the higher duties on various food products. While maintaining that the packers and processors and dealers will reap the benefits from the tariff, regardless of how high the rates on agricultural products may be, they say the farmer will get little.

Senator McCumber, leader of the protection forces, says that "this is the first time the West has had enough men on the Finance Committee to give the farmers a square deal in tariff legislation," and the agricultural tariff bloc is determined that the farmers shall have protection, if such a thing be possible.

—x—

Chances Against Ship Subsidy.—The consensus of opinion based upon interviews with senators and congressmen leads to the conclusion that the only important measures that Congress will pass before adjournment are the tariff and soldiers' bonus. The House is taking a recess until August 15.

The chances are against any action on the ship subsidy bill this session. Chairman Lasker appears to have been more successful in "selling" his subsidy scheme to the President than to Congress. He is being criticized severely by some of the farm organization representatives, not only for his insistence upon the sale of intoxicating liquors on board United States Shipping Board vessels in what is believed to be open defiance of the Eighteenth Amendment, but because as a public official he is devoting his time and the efforts of the Shipping Board of which he is the head, largely to propaganda in favor of a ship subsidy.

There is also resentment being shown by farmer representatives because of Chairman Lasker's attempt to lead the President and Congress to believe that the farmers are behind his ship subsidy scheme in great numbers, when reports that are coming in from all parts of the country indicate that there is little farmer sentiment anywhere for the subsidy.

In a letter addressed to Congress, Chairman Lasker insists that Congress enact the ship subsidy law to enable private shipping interests to earn profits limited to 10 per cent. That is, "the administration's proposal," says Lasker, "limits the profits of any fleet receiving the benefits of the government aid to 10 per cent in any one year, each year standing by itself." All over 10 per cent profit is to be divided, half going to the government.

This 10 per cent profit and fifty-fifty above proposition is looked upon by critics of the scheme as somewhat inconsistent, in view of the fact that those who are strongest supporters of Mr. Lasker's ship subsidy proposition have been most critical in pointing out the 8 per cent profit limit in Henry Ford's Muscle Shoals fertilizer proposition as highly extravagant.

Senator Borah of Idaho, in announcing his opposition to the administration merchant marine bill, said: "This is not a good time to give a favored class an opportunity to draw upon the Treasury for millions of dollars. It is not a good time either to create a body of men who are practically exempt from the control of the people, and who together with their friends, particularly favored with reference to taxes and the Treasury, would become a body potential for the very worst kind of corruption in government."

—x—

Future Trading Act in Senate.—The Capper-Tincher bill to regulate grain exchanges, known as the "Grain Futures Trading Act," having passed the House, is now waiting action by the Senate. The bill is designed to correct the grain futures act in its defects wherein it was held unconstitutional by the Supreme Court on May 15.

—x—

Lumber Men Oppose Forest Service Changes.—The organized lumber manufacturers and the American Farm Bureau Federation are co-operating in their opposition to the removal of the Forest Service to the Department of the Interior. The farmers of the country are unanimously in favor of inaugurating a general forest policy that will insure a future timber supply and make sylviculture a permanent industry. They are convinced that we must have adequate fire protection and a system of taxation that will promote the renewal of forests.

USEFUL for all the little ailments—bumps, bruises, sores, sunburn and chafing. Keep a bottle in the house. It's safe and pure. It costs very little.

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Not even USCO ever touched this value before

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The truth is that men have *always* found USCO an outstanding money's worth no matter what its price.

Today at $10.90 USCO maintains its established standard of quality.

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Men who have used USCO have never been inclined to measure its value by the general run of tires.

Since last fall when USCO established the $10.90 price range they have recognized it as a value beyond *any possible comparison.*

A still greater money's worth than even USCO itself had reached before.

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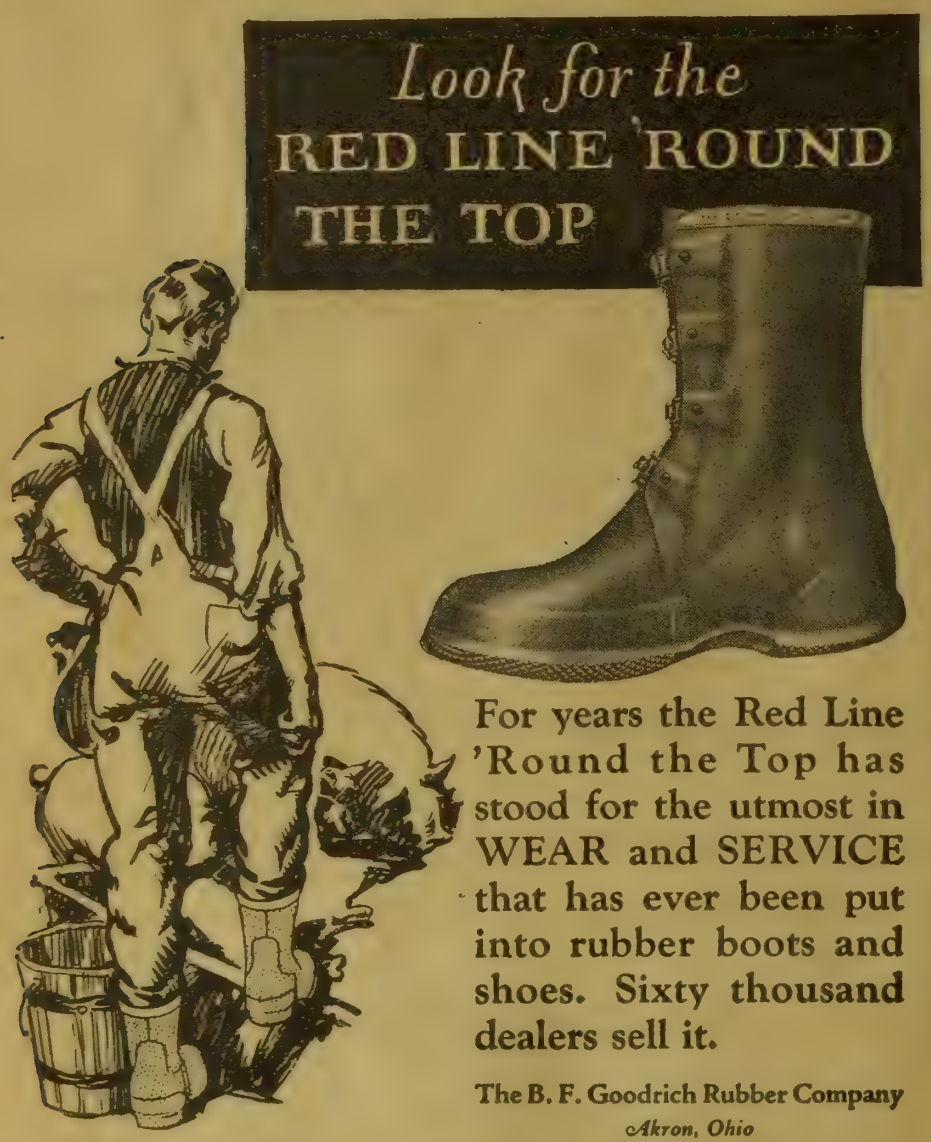

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The Rural Household

Questions about home problems promptly answered by letter and through the magazine. Letters from women containing helpful suggestions for improvement of rural life are always welcome. Address all communications to Mary G. Collopy, Editor Home Department, Western Farm Life, Denver, Colo.

Clean hands at night! That is the pride I ask,
But let me stand at service through the day;
Let me go gladly to my grimy task,
I'll bear the dirt which I can wash away.
Though deep in mire, Life calls on me to fight,
What matters that if I am clean by night?

—Edgar A. Guest.

Can We Help Community Church?

Rural Household department will gladly give suggestions for church suppers, telling how you can plan your menu so that it will satisfy your patrons and yet yield a profit. Let us know if you care for such suggestions.

Do you need a list of plays? Let us know whether you want humorous or serious plays and for how many participants.

The Iceless Refrigerator.

These are the days that make us wish we had built a fireless cooker and an iceless refrigerator last winter when we had more spare time. The iceless refrigerator has already been described in this department. If there are any readers who are interested in obtaining full directions for making this simple, inexpensive, labor-saving, food-saving device, write to your county agent, your home demonstration agent, or Extension Service, care Colorado Agricultural College. This bulletin will be mailed free to you.

My Neighbor's Story.

The farm bureau women of Mountain Breeze community had planned to meet every two weeks, even during the busy summer season. The home demonstration agent was surprised when Mrs. Finney, the hostess, telephoned her saying that it would be an "all-day meeting." "But you have hay men to cook for," the agent objected. "I know that, but we will have our lunch over before they come in, and we can begin work on our dress forms in the morning," replied Mrs. Finney.

Mrs. Finney was one of those busy women who do so much with so little "fuss" or lost motion, consequently her plans did work out. The lunch which the women brought, they spread in the dining room while Mrs. Finney set a big kitchen table for the men. Much work was accomplished on dress forms. The women worked faithfully all afternoon. At 4:30 the hostess came into the dining room with a big birthday cake. In spite of their protests against so much work. Mrs. Finney announced that Mrs. Aicher happened to be 48 years on that particular day and that she believed in parties for grown-up girls as well as little ones. In the pleasant time that followed the members agreed to have a big cake for each birthday. The fun more than repays the extra work, they decided.

Is Your Baby Too Hot?

Is his food kept clean, cool, and covered?

Do you lessen heat production by giving less food and more water?

Has your baby too many clothes for these hot days? Do you see to it that neither starched clothing nor woolens touch the skin?

At night, do you take off everything that the baby has worn during the day, give him a fresh diaper and a soft roomy night slip?

Do you bathe your baby at least once or twice a day?

Did you ever try a starch, bran, or soda bath for a baby whose skin is chafed or who is suffering from prickly heat? For the starch bath use one cupful of ordinary cooked starch, without adding anything to it, to one gallon water, and for the soda bath one gallon water to two tablespoons baking soda.

Are baby's eyes protected from the glare of sunlight when he is asleep as well as when he is awake?

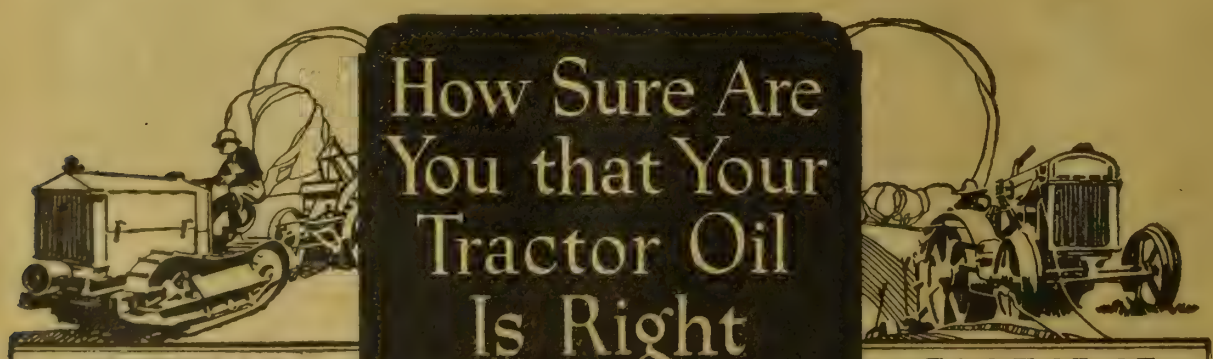
Our Fashion Service.

All patterns 12 cents each. Address Western Farm Life, Pattern Department, 1518 Court Place, Denver, Colo.

Read This Before Ordering: Patterns ordered through this magazine are mailed promptly from the factory at Brooklyn, N. Y., and arrive in 10 to 12 days from time order reaches Western Farm Life. Be sure to specify size and number of patterns. Write your name and postoffice address plainly to avoid delay. These patterns are handled at cost, as a service to our women readers. The price of 12 cents includes postage.

4050—A Dress With New and Graceful Lines. Figured viole or the new tissues would be attractive for this style. The drop yoke is youthful and the fulness of the waist portions makes this style becoming to slender figures. The pattern is cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. A 38-inch size requires 5⅝ yards of 32-inch material. The width of the skirt at the foot is 2⅝ yards.

3640-4046—A Good "Sports" Costume. For the "sports" woman, the blouse best liked is one on straight lines and unconfined by a belt, which would hinder the movement of the arms. This style slips on over the head and may be finished with short or wrist length sleeves. The skirt is a new model with smart plaits. The Blouse pattern, 3640, is cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. It will require 3¼ yards of 36-inch linen or drill for a medium size. The Skirt pattern, 4046, is cut in



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Heavy

Transmission:
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Grease Cups:
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LUBRICATION ENGINEERS not only understand the motor of *your* tractor. They have covered the entire subject of tractor lubrication and oil supply. It is a part of their life's work.

Consequently, you can rely absolutely on the recommendations given in the Continental Tractor Lubrication Chart. And remember, there are fifty years of refining experience back of Polarine and Stanolind Tractor Oil. There are none better made.

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Motor:
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TRACTOR LUBRICATION

seven sizes: 25, 27, 29, 31, 33, 35 and 37 inches waist measure. A 29-inch size will require 4¾ yards of 40-inch tweed, suiting, serge or linen. With plaits extended lower edge of skirt measures 3¾ yards.

TWO separate patterns, mailed to any address on receipt of 12c FOR EACH pattern, in silver or stamps.

4003—A Popular Suit for the Growing Boy. Here is a design that is easy to develop and which possesses a very practical feature in the form of an underarm gusset that will relieve strain at that part of the blouse. The pattern is cut in four sizes: 4, 6, 8 and 10 years. It will require 3⅝ yards of 27-inch material for a 6-year size. If desired the blouse may be made of madras or Indian head, and the trousers of cloth or khaki or other contrasting material as illustrated.

4056—A Pretty Frock for the Growing Girl. Tucks and a fine sash trim up this simple dress, that boasts of real up-to-date-ness in its puff sleeve and low neck line. Organdy or voile will be quite right for this model. A touch of embroidery is a dainty addition. The pattern is cut in four sizes: 6, 8, 10 and 12 years. A 10-year size requires 3 yards of 40-inch material.

CATALOGUE NOTICE.

Send 12c in silver or stamps for our UP-TO-DATE SPRING AND SUMMER 1922 CATALOGUE, showing color plates, and containing 500 designs of Ladies', Misses' and Children's Patterns, a concise and comprehensive article on dressmaking, also some points for the needle (Illustrating 30 of the various simple stitches), all valuable hints to the home dressmaker.

Summer Clothes Hints.

Keep your organdy dress crisp by washing it in cold water to which has been added a little thin boiled starch. Do not put it into hot water at all. Add a few fresh organdy flowers at the belt. They are very easily made by rolling the edges of bias strips. Even the smallest scraps can be used for leaves and flowers.

Always iron pongee when it is perfectly dry. Never sprinkle it.

Light-colored stockings are cooler than black.

Very attractive trimmings for a child's dress are gingham squares embroidered in center with lazy-daisy stitch. These could be placed diamond-shape above the hem of the dress. Very fine pink checked gingham embroidered in yellow and green or blue and green is pleasing. This stitch takes little time.

A "run down" heel ruins the appearance of an otherwise well dressed woman.

Starched petticoats are not with us now. We like them unstarched because they give our soft dresses a chance to hang naturally and—they save ironing.

Dry your white silk stockings and gloves in the shade. This prevents them from turning yellow.

Faded flowers on your hat can be brightened by the application of oil paint mixed with gasoline. Even water color paints can be used successfullly on cotton flowers.

State Farm Bureau News.

One of the main objects of the July 3 meeting of the executive committee was to take action on the recommendation of the Committee of One Hundred on taxation. E. R. Bliss, chairman of the taxation committee of the Colorado Farm Bureau and a member of the executive committee of the Committee of One Hundred, gave detailed report of the action that had been taken relative to the proposed personal income tax law and the initiated amendment to the state constitution which would make the income tax possible. On account of the short time left for filing the petitions to initiate the constitutional amendment with the Secretary of State, it was necessary to circulate the petitionh rapidly.

After a full discussion the following resolution was adopted:

Be it Resolved, That the Colorado State Farm Bureau heartily endorses the recommendations of the Committee of One Hundred, especially the enactment of a state personal income tax law, provided that in no case shall the net revenues collected through a tax on incomes together with the property tax now collected for state purposes be a sum in excess of the amount that would be collected upon property under the constitutional limitations that are now or may hereafter be provided. All funds collected in excess of the above amount shall be placed in the general state school fund to be distributed as now provided.

We also endorse the following recommendations of the Committee of One Hundred:

1. That the most rigid economy in the administration of state, county, school, and city affairs and in the construction of highways and all other public improvements.

2. That all overlapping boards, bureaus, commissions and inspection departments shall be consolidated or dispensed with.

3. That a practical budget system shall be adopted in all departments of public service and that every department of public service shall be required to live within its appropriations.

4. We are opposed to the further exemption from taxation of any class of property and the further issuance of tax exempt securities.

If the proposed amendment is adopted the legislature will be empowered to enact an income tax law for the state. In that event the Colorado State Farm Bureau wishes to urge upon every taxpayer of the state the necessity for his or her co-operation in seeing that a fair and equitable income tax law is proposed to the legislature for enactment.

Resolutions also were adopted urging greater use of Colorado products both raw and manufactured, by Colorado consumers in order to save the freight on Colorado goods out and outside goods in. The fact that large quantities of high-grade products, both raw and manufactured, are shipped out of Colorado to make room for products shipped in, makes it necessary that the matter be brought to the attention of those interested.

Bureau Boosts Wheat Improvement.

The Colorado State Farm Bureau is working with the Colorado Agricultural College in formulating a plan to cooperate with the Southwestern Wheat Improvement Association, farmers' organizations and others interested, in an effort to improve the quality of wheat marketed in the territory tributary to Kansas City.

The wheat buyers are particularly interested in getting a uniform, higher quality of wheat and are anxious to pay a relatively higher price for a standardized product.

The wheat grower can, by improved farm practices, use of better seed, practice of sound crop rotation and cultural methods, bring about a very marked improvement in the quality of wheat produced, and get a price that would pay well for all extra effort. Proper methods of harvesting, stacking, threshing and storing also affect the market value and require close attention. One of the main purposes of this campaign is to improve the quality of wheat in the Kansas City territory so that it can compete on the world market with the high-grade wheat that is coming from other wheat growing sections. It is evident that the quality of wheat must be improved if the Kansas City territory is to maintain its proper position in the wheat markets. The Southwestern Wheat Growers' Association is taking the lead in this work by perfecting an organization which will work with all other organizations for bringing about the desired results.

Bureau Membership Increases.

Reports on the membership campaigns showed better progress being made than at any previous time and that the outlook was most assuring. Demands for organization in new and old territory are taxing the organization department to the limit. Plans were discussed for more systematically conducting the campaign.

Thresh Directly Into A Columbian

Your grain will "cure" better than if "sweat in the stack" and improperly stored. No extra handling and less waste. None is wasted, destroyed by rain, fire or weather. Shrinkage is less than 1 per cent as compared to 10 per cent when stored in the open—a saving that will pay for a Columbian.

Stored Grain Will Pay Big Interest—A loss or small profit results from selling grain on the low harvest and threshing time market. Someone else will store it for a higher market if you don't.

Delivered Prices Reduced—Columbian delivered prices have been greatly reduced. The improved triple plate, vertically corrugated Columbian construction makes the strongest bin available. Write for beautiful 4-color booklet No. ..., including Government letter urging farm storage in metal bins and ask for prices delivered at your station. Sold by all good merchants.

COLUMBIAN STEEL TANK COMPANY
915 West 12th St. Kansas City, Mo.

YOU SAVE FROM $7 TO $15 ON EVERY SADDLE AND HARNESS

Direct from our workshop. Send for our free catalog.

THE FRED MUELLER Saddle and Harness Co.
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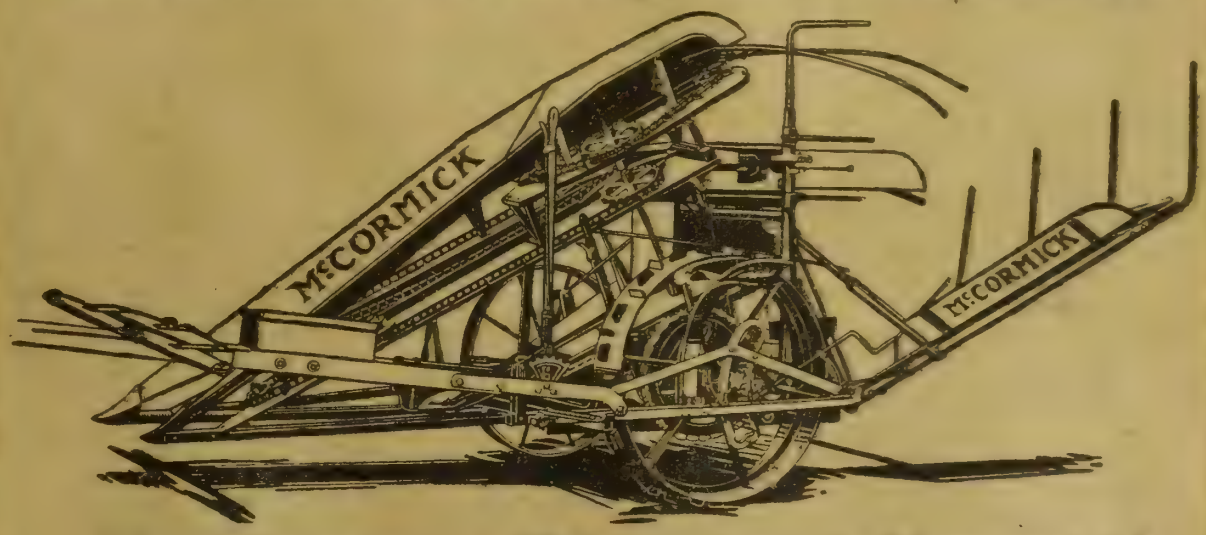
Kill All Flies! THEY SPREAD DISEASE

Placed anywhere, DAISY FLY KILLER attracts and kills all flies. Neat, clean, ornamental, convenient and cheap. Lasts all season. Made of metal, can't spill or tip over; will not soil or injure anything. Guaranteed.

DAISY FLY KILLER at your dealer or 5 by EXPRS. 3, prepaid, $1.25.
HAROLD SOMERS, 150 De Kalb Ave., Brooklyn, N. Y.

McCormick-Deering Corn Machines

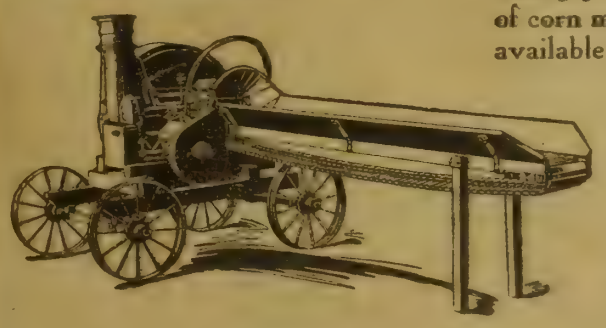


McCormick, Deering, and Milwaukee Corn Binders

McCormick, Deering, and Milwaukee corn binders cut and bind 5 to 7 acres per day. Wide-range gathering points save short, crooked, tangled and fallen stalks. Bundle carrier regular. Elevator to load bundles on wagon, or special conveyor bundle carrier provided on special order.

McCormick-Deering Ensilage Cutters

McCormick-Deering ensilage cutters are made in five sizes. Cut 3 to 25 tons per hour; 6 to 25 h. p. required. All working parts carefully housed. Force feed, large throat. Strong flywheels built of boiler-plate steel. Cutting and elevating done in one operation, saving power.



IN the coming autumn it will be necessary to take from the fields some three billion bushels of American corn. Corn harvesting machines must be put in order. This year, as in all years, profit will be determined largely by the efficiency of your equipment for handling this crop.

Veteran corn growers for years have made corn yields greater with the expert help of McCormick, Deering, and Milwaukee Corn Binders, McCormick-Deering Ensilage Cutters and other McCormick-Deering equipment. At the start of the corn harvest they are fortified by these machines and by dependence on the alert co-operation and service of this Company, its branch houses, and dealers close at every hand.

Thirty years ago began the pioneer work in the making of corn machines. Today, most efficient equipment is available for every operation. The careful corn grower will realize that the steady accumulation of Harvester experience is important for him. Whatever the need—for corn binder, picker, ensilage cutter, husker and shredder, sheller—McCormick-Deering dealers the nation over may be depended on for machines whose practical utility is everywhere acknowledged.

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92 Branch Houses and 15,000 Dealers in the United States

WESTERN CANADA for Stock Raising

Vast stretches of undeveloped fertile agricultural land of the highest productiveness await the settler in Western Canada. The land possesses the same character of soil as that which has produced the high quality of cereals that have carried off the world's premier honors so many times. Native grasses are Rich and Abundant. Cattle fattens on them without any grain being fed.

The place for the man with limited capital to overcome difficulties of high priced land or the burden of heavy rents is in Western Canada—where *land is cheap*, where a home may be made at low cost, and where *dairying, mixed farming and stock raising are particularly profitable.*

Homestead of 160 acres in the more remote districts **FREE to settlers.**

For illustrated literature, maps, description of farm opportunities in Manitoba, Saskatchewan, Alberta and British Columbia, reduced railway rates, etc., write to

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THE PERFECT POTATO DIGGER

You harvest your ENTIRE CROP when you use the Dowden Digger. Does the work in half time and with half the help. Cuts labor costs in two.

Increases Your Profits

The Dowden Digger works in all soils, at all depths, on hillside and level. Noted for 30 years for its light draft and clean work. Simple, strong, durable. Low upkeep cost. Absolutely guaranteed.

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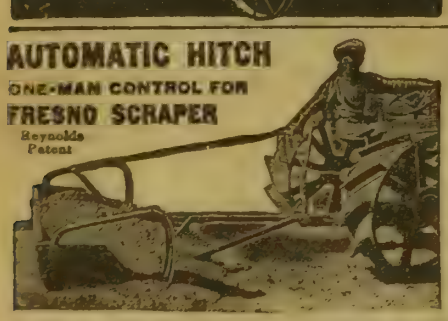

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Farmers' Service Bureau

Questions regarding any branch of farming, livestock production, animal diseases, legal matters pertaining to the farm, cheerfully and promptly answered by letter and through the magazine. Address Service Bureau, WESTERN FARM LIFE, Denver, Colo.

Celery Blight or Leaf Spot.

Our young celery plants, many of them, are turning yellow and seem to be dying. What can we do to prevent the trouble from spreading.—N. B., Denver county, Colo.

Your trouble is probably what is known as blight or leaf spot. It is caused by a fungus and is very destructive to celery.

According to the U. S. Department of Agriculture's bulletin on celery, this blight generally appears immediately after a period of sultry weather. Any check in growth, which weakens the plants, makes them more liable to be attacked by the disease.

As a preventive every effort possible should be made to keep the plants growing as vigorously as possible throughout the entire period of their growth. Too often when the disease makes its appearance, it is too late to do much to eradicate it, as much of the injury has already been done.

Under favorable conditions spraying the plants with bordeaux mixture, 4-5-50, is beneficial in checking blight. You probably can get bordeaux mixture already prepared from dealers in seeds and other garden supplies. The formula 4-5-50 means that the mixture is made up of 4 pounds of copper sulphate or blue stone, 5 pounds of stone lime, and 50 gallons of water. Of course, it can be made up in smaller or larger quantities by using the same relative quantities of the materials.

In making the bordeaux mixture, first dissolve the blue stone by suspending it in a gunny sack in a few gallons of water. Use only wooden, or earthen, vessels. If warm water is used, the blue stone will dissolve more rapidly. The stone lime should be slacked carefully and after the slacking is completed add sufficient water to make the milk of lime. Water is then to be added to each material making two solutions of 25 gallons each. To prepare the spray for use, put equal quantities of the lime and blue stone solutions into a vat, barrel, or spray tank. Strain the material before attempting to spray it in order to remove any particles large enough to clog the spray nozzle.

You will find it very helpful to obtain a copy of the U. S. Department of Agriculture's bulletin entitled "Celery." Address Department of Agriculture, Washington, D. C., Division of Publications.—G. C. W.

Obtaining Right in Mortgaged Crop.

A and B lease a ranch jointly from C, and D has foreclosed on a mortgage he holds. A and B refuse to sign a lease jointly and B gets the lease because he is living on the ranch. They had jointly put in a fall crop before the mortgage was foreclosed. B now refuses to let A harvest the crop. A is acting as agent for D. How shall A proceed to harvest this crop?—J. H. P., Wyoming.

The crop should be harvested and then the rights of the parties can be litigated if necessary. An action in forcible entry and detainer ought to go against B if D is in possession.—Hamlet J. Barry, Equitable Building, Denver.

Bringing Horses From Wyoming.

What examination is required in bringing horses to Colorado from Wyoming? How about a dog? Does it make any difference where the examination is made? There is no veterinarian near here.—V. M. W., Wyoming.

All you require on the horses is a health certificate from a licensed veterinarian. It does not matter where the veterinarian is located in Wyoming. Nothing is required on the dog.—G. C. W.

Feed Value of Buckwheat Bran.

We have on hand a quantity of buckwheat bran and wish to know its value for feeding.—S. S. L., Garfield county, Colo.

The black, woody hulls of buckwheat have little feeding value. The buckwheat middlings, however, which is that part of the kernel immediately under the hull commonly separated from the flour in milling, has a high feeding value. It contains 28 per cent crude protein and 7 per cent fat, and has little or no fiber, or indigestible material. I presume the product you have is a mixture of hulls with the middlings and would more probably be called buckwheat feed. A buckwheat by-product of this character, which does not consist of more than half pure hulls, is worth about 20 per cent less than wheat bran. Of course, the richer it is in the middlings, the more valuable it is as feed.

Buckwheat by-products are nearly always fed to milk cows and have the reputation of producing a large flow of milk. Experiments reported from the Vermont experimental station on feeding straight buckwheat middlings to milk cows show a production of 8 to 11 per cent more milk than an equal weight of a mixture of equal parts corn and wheat bran. Cows do not usually relish buckwheat middlings as the sole concentrate.

If you wish to know absolutely the character of the product you have, it is possible you could have a sample analyzed by the chemistry department of the Colorado Agriculture college, Fort Collins, Colo.—G. C. W.

Redemption of Mortgaged Property.

My husband mortgaged some land and I, his wife, had to sign the papers. He did not get the money until August. Now they tell me that unless we pay interest by the first of June they will foreclose the mortgage. How long a time do we have to redeem the property?—Z. A. P., Washington county, Colo.

The time of redemption is six months for the owner and nine months for a creditor.—Hamlet J. Barry, Equitable Building, Denver.

Advertising Stray Stock.

For the last two years two stray horses have been running in a pasture in which I am interested. No one has ever come to look for them. What should be done about them?—J. L., Pueblo county, Colo.

The law requires that stray stock picked up must be reported to the State Board of Livestock Inspection, State Office Building, Denver, Colo., within five days after the stock is taken up.

In your case the only thing that is left for you to do is to make the report as soon as possible. This commission will then tell you what disposition to make of the stock.—W. S. E.

Club Members Fascinated by Radio.

(Continued from Page 5).

and the leader continued: "I've got the dandiest, inexpensive wireless outfit you ever saw."

In telling of the effect of this statement Mrs. Ferguson said: "Have you ever put a thermometer in hot water and watched the mercury rise? That's exactly the way the light came up in that boy's face. He was on his feet in an instant and right then and there I made a club member of him again. His mother has since said, laughingly, that she doesn't know whether she likes me or not, for since John has taken up radio he is blind, deaf and dumb to everything else."

Fathers Were Doubtful.

When the work first started in Boulder county some of the fathers were doubtful of its value. It seemed to be such an all absorbing, time-killing occupation that farm work was forgotten. But after a time, when the practical value of radio became apparent and weather reports and markets began to sift in from the ether, the fathers decided, "Well, that's something we can use." And "Go to it, son, we're with you," then became the general instruction. The mothers are more delighted, for that old ache for town and the movies has been forgotten by the boys in the eager interest of a study that opens an astonishing field of activity for rural boys and girls.

Hard to Get Leaders.

It has been difficult to get experienced leaders, but in every case young men have been found who are keeping abreast of the rapid development of the new science and who are able to guide the boys along the proper channels. Some leaders are following one method of instruction and some another; the work has not yet been standardized. Some prefer teaching the code before making sets; others have taken up the study of construction and "hook ups" while some have advised purchasing detector sets and adding to the outfit as the boys learn to make the parts. The only fixed requirement for all clubs is that each member learn to recognize ten words of the code and that he make at least one workable part of his set during the first year.

The cost of sets has varied from $4 to $15 and the average set has cost about $6.75. In some cases the only part purchased was the receivers, as the boys bought material and made all the rest. A tour is planned from one club station to another, so that all may become familiar with what the others are doing.

You Are Sure when you buy this Saw!

When you see the *Keen Kutter* trade mark on the blade you know the Saw is finest tested steel, full of spring and life, sure to cut fast and clean.

Roomy carved apple-wood handle won't tire your hand. That practical feel and balance!—*Keen Kutter* Tools all have it. Keen Kutter assures you the most for your money. Sold by leading Retailers everywhere.

"The recollection of QUALITY remains long after the PRICE is forgotten"—E. C. Simmons
Trade Mark Reg. U. S. Pat. Off.

Simmons Hardware Co.

Our Prices on all
KEEN KUTTER
TOOLS REDUCED

EASY NOW TO RID YOUR PLACE OF FLIES

Widely Known Scientist Discovers Wonderful Chemical That Is Fatal to Flies—Not a Poison—Harmless to Stock.

Flies are one of the most dangerous and annoying things with which the farmer has to contend. Now, through the discovery of E. R. Alexander, widely known scientist, you can rid your house and barns and livestock of these pests almost instantly, and with no trouble at all. This discovery is in the form of an organic chemical that is fatal to flies, and similar pests, such as chiggers, mosquitoes and moths.

This new discovery, which is called Alexander's Rid-O-Fly, is not a poison. Though it kills flies like magic, farm animals and human beings are not affected by it at all. In addition to killing these insects, Rid-O-Fly is a strong repellant. Flies will not come near stock or buildings where Rid-O-Fly has been used. Rid-O-Fly is particularly valuable for cows and horses, as it is a known fact that flies do untold harm to these animals.

So confident is Dr. Alexander that his discovery will rid your house, barns and livestock of these pests that he offers to send a $2.00 supply for only $1.00 on the guarantee that if Rid-O-Fly does not solve your fly problems it will cost you nothing. Two big Kansas City banks guarantee the reliability of this offer.

SEND NO MONEY—just your name and address to the Alexander Laboratories, 1004 Gateway Station, Kansas City, Mo., and this introductory offer will be mailed at once.

Big Money Boring Wells

Have water on your own farm. In spare time make wells for your neighbors. It means $1000 extra in ordinary years, double that in dry years. No risk—no experience needed.

One Man One Team

Outfits for Getting Water Anywhere

Earth augers, rock drills and combined machines. Engine or horse power. *Write for easy terms and free catalog.*

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A saving of at least half on all makes of Motorcycles and Side Cars, singles or twins—expertly rebuilt, guaranteed. Better buys than new machines. Send 2c for Bargain list.
Western Supplies Co., 409 Hayutin Bld., Denver, Colo

Dairying and Hog Raising

All letters regarding commercial and technical features of dairy farming and hog production promptly answered. Address all communications to Dairy Department, Western Farm Life, Denver, Colorado.

Larimer county dairy farmers near Wellington have formed a dairymens' association to market cream co-operatively. The man in charge will test the cows of the members and assist them in keeping milk records.

Perhaps the greatest drawback to the dairy business is that a cow will produce a little milk, no matter what she is fed. Too many dairymen are satisfied with that little bit.

A scrubby looking purebred bull is a poor advertisement for registered stock. Flies, heat and short grass will make the best bred bull look like a scrub. Give him some protection from flies and heat and feed him a little grain during the summer. At night turn him out to graze and exercise.

Cooling Tank for Milk.

During the winter months it is comparatively easy to handle milk so it will keep sweet. In the summer months comes the real test. You cannot handle milk and cream successfully during the summer without having some means of cooling it quickly and keeping it at a low temperature. The use of a tank is the most satisfactory means which can be employed. The pump should be kept going so that fresh water direct from the well is flowing through this cooling tank. On many farms where such a tank is used all the water going to the various stock tanks is first pumped into the cooling tank, the overflow water going to the stock. Keeping milk sweet is almost entirely a matter of cleanliness and temperature regulation.

You cannot call yourself a successful dairyman until you have learned how to produce clean milk. Milk is a human food and should be treated as such. Dirty milk always sours more quickly than clean milk and quite often has other bad flavors. These bad flavors and the sourings are caused by bacteria which are tiny organisms too small to be seen with the naked eye. They are everywhere present and every particle of dirt has upon it large numbers of these tiny organisms. Most of the bacteria which gets into the milk come from dirt on the cow, which falls in the pail while you are milking. These organisms also get into the milk from the utensils such as cans, pails, strainers, coolers and separators, which have not been properly cleaned and sterilized before using.

The bacteria reach their greatest activity and multiply most rapidly when the temperature of the milk is high. They increase very slowly at lower temperatures and for this reason milk should be cooled as quickly as possible and kept at least as low in temperature as water fresh from the well. Milk would never sour if it were possible to keep all the bacteria out of it, but some of these organisms get in in spite of our efforts to keep them out, and the only thing we can do is to keep them from increasing rapidly in numbers.

Briefly, then, the essentials in caring for milk in the summer are to milk in as cleanly a manner as possible, wiping the flank and udder of the cow with a moist cloth before milking, or even washing if these parts are very dirty, careful cleansing and scalding of utensils, protecting the milk from flies and dirt after it has been drawn, and finally cooling it as quickly as possible and holding it at a low temperature. It may be possible to get along without a milk house or milk room, but the best results in keeping milk or cream in the proper condition will come from having a room planned for the purpose of handling it in the best manner possible and the cooling tank is perhaps one of the most essential features of the milk room.

Treatment for White Scours.

A five-months-old calf has a bad diarrhea which started with the passing of blood. There is not much blood now but the calf strains all the time and is getting very weak. What can I do?—P. E. A., Douglas county, Colo.

White scours is common in calves not over one week old. It is caused by germs (Bacillus coli communis, possibly by B. Enteriditis and B. Pyocyanous) and hence must be handled like any other infectious disease. The infecting germs may enter the navel cord immediately after birth, with the milk, or may contract it from the mother before birth, with the milk, or may contract it from the mother before birth. Fully 80 per cent of the infected calves die.

Think more about preventing the spread of the disease among the calves than in curing sick ones. Take the well calves away from the sick ones and place them in clean quarters. Clean and disinfect the premises. There is no use trying to save calves with this disease.

What is commonly known as white scours in calves, is not the disease as above described. It occurs in older calves, and while to a certain extent infectious, is not nearly so fatal. It is due largely to errors in feeding. In this disease the feces are thicker, yellower, and less fetid. The other disease is rapidly fatal, while in this disease the calves may live for several days and many of them recover. The diet should be restricted and if fed out of a bucket the same should be sterilized every day. Better take calves from their mothers and feed whole milk. Give one dram castor oil. Mix one half ounce formalin with 15½ ounces boiled water. This will make a stock solution from which add one teaspoonful to each pint of milk fed. This is a very effective remedy. Lime water added to the milk, one dram to one quart of milk, is recommended.

White scours mixed bacterins are recommended and sold by biologic firms for the cure and prevention of this disease, and the one first mentioned, but your principal reliance must rest with the treatment recommended above.—G. H. G.

Cow Retained Afterbirth.

What can I do for a cow that retained part of the afterbirth eight days after calving two months ahead of time? A veterinarian removed the afterbirth, but failed to get it all. Now I am unable to get the cow with calf. She accepts service but stands and strains for two days and discharges blood from the vagina.—J. W., Weld county, Colo.

The cow probably has a catarrhal or inflamed condition of the uterus (endometritis) caused by the retained placenta. A retained placenta is a strong indication of the abortion disease. It is dangerous to remove the retained afterbirth forcibly, likewise to leave a portion of the same in the uterus for several days without flushing the uterus with mild disinfectants.

The cow is in no condition to breed. Call a veterinarian from Brighton and have the cow examined. It is possible that she may again become a breeder. If she has the abortion disease she has probably infected the bull.—G. H. G.

Period Parasites Most Harmful.

Lice and internal parasites of hogs are known to cause great losses to pork producers, but little is known about the period of the animal's life when the losses from these causes are greatest. A test is being conducted this spring and summer by the United States Deparment of Agriculture to determine the comparative damage done before weaning, during growth, and while the hogs are being finished for the market. In order that conditions may be comparable to those on the farms, twenty hogs will be used in each lot.

Jack Registry Requirements.

After August 1 new measurements will be required to register jacks and jennets in the Standard Jack and Jennet Registry of America, Kansas City, Mo. For jacks the following will be required: Height, 14¾ hands standard; heart girth, 65 inches; bone, 8 inches. For jennets: Height, 14¼ hands standard; heart girth, 63 inches; bone, 7½ inches. If you have animals meeting present requirements but below the new they must be registered before August 1 or be forever barred.

De Laval Cream Separators have won 1081 grand and first prizes at all important expositions and fairs in the world during the past 40 years.

De Laval butter has won first prize at every meeting of the National Buttermakers Association, with but one exception.

51% ARE DE LAVALS

The overwhelming number of De Laval Cream Separators in use is proved in a striking and forceful way by three recent investigations conducted by disinterested people, covering most of the principal butter-producing states:

(1) From an investigation conducted by the Purdue Agriculturist (Indiana), Iowa Agriculturist, Cornell Countryman (New York), Agricultural Student (Ohio), Penn State Farmer, Tennessee Farmer, published by the students of the various agricultural colleges in question, and their readers, who received the questionnaire, are either graduates or former students:

64.8% use cream separators of the following makes:

50.6%—De Laval.
16.8%—Nearest competitor.*

(2) Sixty-two per cent of the cream separators on 388 representative Minnesota dairy farms, selected at random and over a wide area, are De Lavals, according to a survey recently made by The Farmer, of St. Paul.

De Laval—62%.
Nearest competitor—6.4%.*

(3) From the Dairy Farm Survey of Hoard's Dairyman (the foremost dairy paper in the world, having a circulation of approximately 85,000 at the time of this investigation).

Have you a cream separator?
80.00%—Yes.

What make?
41.18%—De Laval.
16.74%—Nearest competitor.*

51.26%—average number of De Lavals, based on the foregoing, which confirms the well-known statement that there are about as many De Lavals in use as all the rest combined.

The only reason there are so many more De Lavals in use is that it is the best separator—skims cleaner, lasts longer, and is easier to clean and turn.

*Names of all separators used and percentages given on request.

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INDIVIDUAL GRAIN
Thresher
(Made in three sizes.)
Operates with your small gasoline engine or small tractor, costing you only
$350 and Upward
according to size and equipment.
60 YEARS' EXPERIENCE BACK OF THESE THRESHERS.
Why wait weeks or months for the big Community Machine? Invest your threshing cost in one of these small machines and you are independent. Ask today for descriptive catalog, prices, etc.
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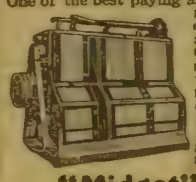

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Self-Contained Roller Flour Mill

Saves the high freights on wheat out and flour and feed in. "The first eight months I made a net profit of over $8000," says A. H. Ling, Jetmore, Kan.; "My profits from the "Midget" Marvel average right around $40 per day." Chas. M. McKinney, Cooper, Tex.: "Was $6000 in debt when I bought my 25 barrel "Midget," and the little mill pulled me clean out of the hole long before I bought my 40 barrel mill from you," says M. A. Kamm, Oxford, Mich.

Capacities: 15, 25, 50 and 100 barrels of as fine roller patent flour a day as any mill can make. Write for free book, "The Story of a Wonderful Flour Mill," trial offer, terms, etc.

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BLACK LEG 100% PROTECTION FOR LIFE from one vaccination with Cutter's Liquid or Solid Blackleg Aggressin. Also Cutter's Cornbred Aggressin and Cutter's Blackleg Pills. Cutter's Aggressin for breeding ewes, wether lambs, etc.

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The O. J. Snyder Saddles and Harness, best in the west. We ship anywhere and Refer to any bank in Denver. Catalog which explains prices and process.

O. J. Snyder
1535 Larimer St., Denver, Colo.

Profitable Farm Poultry

W. E. VAPLON.

Questions about the farm flock promptly answered by letter. Free advice on all phases of poultry production. Address all inquiries to Poultry Department, Western Farm Life, Denver, Colorado.

Again let us emphasize: "King rooster makes a better roast than a leader of a summer flock."

Broody hens and lack of nest space often leads to broken eggs and the egg-eating habit. Have a nest for every four hens and then remove the broody hens as they start their loafing.

Keep late pullets growing if you expect winter eggs. Mixtures suggested for the hens last month will be excellent for the young stock after they are six weeks old.

Most hens are lazy enough to take their feed in the easiest way, so just putting a good mash in a hopper is not enough for the grain comes in bigger pieces, hence is easier to get. Six pounds of grain per one hundred hens per day is enough during July. Feed a little in the morning and the most about an hour before roosting time in the evening, and the hen will make eggs from the mash you keep before her all the time.

Under the egg reports of Denver newspapers, we find almost daily reference to the poor quality of eggs coming onto the market and blame is laid on the hot weather. Why not blame the indifferent farmer and poultryman who allows the male birds to run with the summer flock, gathers his eggs when he takes a notion and does not care how many broody hens are littering up the nest? The unfortunate feature is that the careful, painstaking poultry man suffers from this indifference of his brother producer.

When a hen becomes broody there are usually partly developed yolks of eggs within her. These are used as reserve food material during broodiness, but are also of value in the egg basket if she is broken of the idea of broodiness before these yolks start to be reabsorbed into the system for the hen will then make them into eggs instead of starting with the pin-head size again. Good feed and care are essential in getting a broody hen back to work. Place her in a coop raised from the ground and having a slatted bottom, for this keeps her breast cool and discourages her quickly, and then feed and care for her as you would your best laying hen. She will pay you well.

Good Eggs for Market.

While it is possible to keep a good egg that is produced in March or April good until midwinter, a good egg cannot be made from a poor one. During the spring months, before the hot weather sets in, most of the eggs marketed arrive in fairly good condition; but with the onset of warm weather the situation is much changed, and eggs reach the packing house in considerable numbers that are not only not fit for storage, but are actually unfit for use as food at all.

The Bureau of Animal Industry has carried on investigations which show that the following simple precautions taken during the very hot weather resulted in the marketing of eggs which graded 97 per cent first class. These results were reported in Bulletin No. 160 of the Animal Husbandry Department, United States Department of Agriculture:

1. Infertile eggs were produced by keeping the males from the laying flock. As has already been suggested, this may be accomplished by disposing of the cockerels as broilers before they reach the breeding age, or by caponizing.
2. The hens were furnished plenty of roomy, clean nests.
3. The eggs were gathered twice daily.
4. They were kept in a cellar that was cool, dry and free from odors.
5. The eggs were taken to market twice a week, being carefully protected from the sun on the way to town.
6. The eggs that were small, dirty, misshapen or found in stolen nests were kept for home use.

Statewide Culling Campaign.

A statewide culling campaign is planned for Colorado under the supervision of the field agents of the extension service of the Colorado Agricultural College, to continue throughout the summer. The goal is to reach 10,000 persons through poultry culling demonstrations conducted everywhere in the state. These poultry producers should cull 500,000 hens this year.

Investigation shows that about one-third of the hens in Colorado are culls, being kept at a loss of one dollar each a year. Getting rid of the culls will result in a great saving. Every farmer who has a flock of hens should be interested in this work.

Further information can be secured through county extension agents or from the Extension Service of the Agricultural College at Fort Collins.

Inspection of Poultry Hatcheries.

The Wisconsin poultry hatcheries are the only ones in the United States which are under state regulation and inspection, according to information collected by the United States Department of Agriculture. Because of the menace to the poultry industry through the sale of young chicks of inferior quality and breeding, the state department of markets and the poultry department of the University of Wisconsin have established regulations and requirements for hatchery flocks and for hatcheries, and those that fill the requirements and live up to the regulations will be known as "Wisconsin Inspected and Accredited Hatcheries and Hatchery Flocks." A list of the accredited hatcheries and flocks has been prepared and published. Chicks purchased from hatcheries on the list bear the mark of the department of markets, which gives assurance that they are standard bred and from reasonably good egg-producing strains. Inspectors issue certificates to owners of hatcheries and flocks that fill the requirements.

Bloodthirsty Incubator Chickens.

Some of our incubator chickens have a tendency to pick each others' toes, even eating the feet and legs off. I feed them meat meal with their regular ration. They are worse when confined to the brooder. What can you suggest?—J. B. F., Weld county, Colo.

This is sometimes a difficult habit to control. About all that can be done is to keep the chicks as busy as possible. When they are confined in close quarters be sure to have plenty of litter for them to scratch in and to cover their toes. Confined chicks need a variety of feed. If they do not have green feed try giving a good-sized onion daily to fifty chicks. If the onion is sliced in thin slices so as to form rings, the chicks will get a great deal of exercise chasing each other around about as they do when one gets a worm. The fact that the trouble is less prevalent when the chicks are at large indicates that the habit is the result of close confinement. Since some of the chicks have acquired the bloodthirsty habit it will be necessary to watch them very carefully and remove at once any that may be attacked.—G. C. W.

Chickens Have Sod Disease.

The heads of some of our chickens break out in watery blisters and the heads of some swell to twice the normal size. They get watery blisters on the feet and their feet swell so they can scarcely walk. As long as I keep them confined in pens or the stable the chicks are free from the trouble. I have cured a few, but it has taken from one to two months. What can I do?—Mrs. H. L. R., Crowley county, Colo.

From your description, I think this disease is without doubt the very infectious trouble which has been given the name "sod disease" of chickens by the Colorado Experiment Station. The experiment station men have been working on it for several years and as yet have not learned just what is causing it. It seems to be prevalent all over the plains area and in each case investigated has occurred only where the chickens run on prairie sod.

The most common treatment has consisted in dipping the affected parts in kerosene. The daily dipping of feet and bills in the kerosene has in many instances been followed by rather rapid and permanent improvement. This seems to be more valuable with the older chickens than with the young ones. One of our readers reports the following treatment:

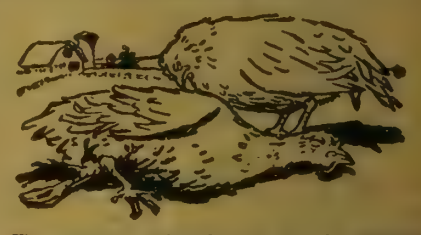
"Never turn the chicks out of their coops earlier than 8 o'clock in the morning, and not at all on rainy or wet mornings. Watch for any signs of blisters from the time they are four weeks old until eight weeks old, for this is the age when they are most liable to be affected. All sick chicks should be kept separate from the rest, so they can be treated regularly. Pick the blisters as soon as they appear with a needle. Pick them each time they fill, as they will close up again and increase in size. Apply the following mixture daily: Kerosene, one teaspoonful; spirits of camphor, one teaspoonful; turpentine, one teaspoonful; carbolic acid, ten drops; skunk oil, two ounces. This mixture should be shaken well before being applied. If treatment is started in time not a chick will be lost, and they will be stunted but little. It would be a good plan to keep your coops as clean as possible, and they should be dry and sanitary."

Write to the Colorado Agricultural College, Fort Collins, for a copy of Bulletin No. 262, which may still be available.—G. C. W.

Lice Kill Chickens In Warm Weather

Summer Months Most Dangerous, Says Poultry Authority — To Prevent Losses Add Minerals to The Fowls' Drinking Water.

If your chickens are sickly, won't lay and are dying off in hot weather, lice and mites are probably the cause. Dr. B. F. Kaupp, famous poultry authority, says: "Lice are most common in July and August. During these months conditions are more favorable for their propagation." To easily get rid of these pests and prevent losses, add minerals to the fowls' drinking water. This does away with greasing, dusting, spraying and dipping. Soon after the fowls drink the mineralized water all lice and mites leave them.



The necessary minerals can now be obtained in convenient tablets, known as Paratabs. They are scientifically prepared, perfectly safe, and dissolve readily. The tablets also act as a tonic conditioner and are warranted to impart no odor or flavor to eggs or meat. They are equally beneficial to young chicks and grown fowls. The health of the fowls improves, they grow faster, stand hot weather better, and the egg yield frequently is doubled. Mrs. M. N., Pulaski, Ky., says: "I am giving Paratab water to my chickens and am having better luck this year than ever before."

Any reader of this paper may try Paratabs without risk. They cost only a trifle and are sold under an absolute guarantee. Furthermore, the laboratories producing Paratabs are so confident of good results that to introduce them, they offer two big $1 packages for only $1. Send no money, just your name and address to the Paratab Laboratories, Dept. 895, 1100 Coca Cola Building, Kansas City, Mo., and the two $1 packages, enough for 100 gallons of water, will be mailed. On delivery pay the postman only $1 and postage. If not delighted with the results in 10 days, notify the laboratories and your money will be refunded in full. Don't hesitate to accept this test offer, as it is fully guaranteed.

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SWISS MILCH GOATS, HIGH-GRADE STOCK; milking from three to five quarts; also young stock. Frank Rauchfuss, R. D., Edgewater, Colo.

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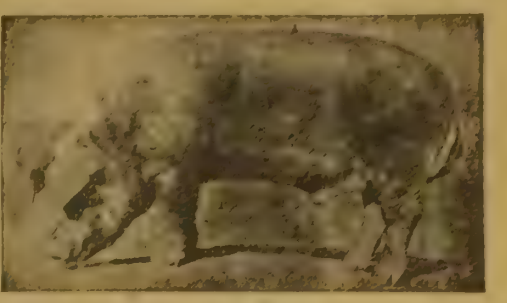

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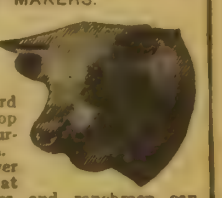

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Mrs. R. G. Douglas
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We have bred hundreds of prize-winning and high-producing Holstein cows, including

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We can supply you with that same line of breeding. Write

McKAY BROS., Caddoa, Colo.

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We offer you a wonderful amount of these Holstein qualities—and from a clean herd. Bull calves from fine record dams. Pahgre Valley Ranch, Loesch Bros., Montrose, Colo.

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FARMERS everywhere are rapidly recognizing the new era of farming—the era of Fordson Farming, the era of farming-profit without the toil and drudgery unavoidable when old-fashioned methods were employed. For the farmer of today has come to realize the tremendous advantages now offered him through the use of mechanical power—bigger crops, larger profits, with time for pleasure doubled.

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This big yield feature illustrates what is probably the chief advantage in farming with the powerful, lightweight, inexpensive Fordson and the Standard Equipment that operates so perfectly with it.

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Wood Brothers Individual Thresher

You will understand its extreme simplicity when you know that there are only five belts and every one of these operates in a straight line. Farmers with no experience, use this Individual without any difficulty at all.

It is guaranteed that even wet straw will not wrap 'round the cylinder, that every Individual will thresh clean.

The World Famous Oliver No. 7
On thousands of farms, the world famous Oliver No. 7 has been the plowing partner of the Fordson from the beginning.

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Oliver Fordson special disc plows have set a new standard. They penetrate the toughest soils, yet are light running.

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Fordson power is available in plowing to the irrigation farmer with the Oliver Two-Way Sulky. Power lift, easy running.

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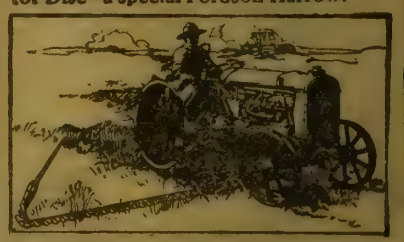
Fitting the Seed Bed the Fordson way with the Roderick Lean Automatic Tractor Disc—a special Fordson Harrow.

Good Work With Roller Pulverizer
Final Fitting of the seed bed with Fordson power and the roller pulverizer has meant more bushels for many farmers.



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Attaches without changes to the Fordson. Power taken direct from drive worm. Makes a one-man outfit with Fordson.

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Tractor speed and accuracy utilized by the Fordson owner with the Amsco special drill. Force feed makes positive planting.

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Cultivating corn is easy for the Fordson farmer with the Amsco Cultivator—special for the Fordson. Made for hard work.

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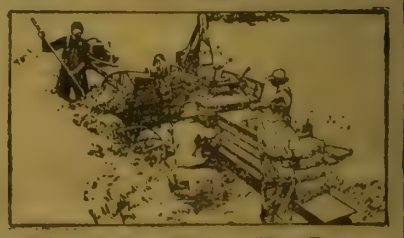
Fordson silo filling with the Money-Maker done quickly and cheaply. Strength and scientific design give perfect work.



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Baling hay with the Fordson and Money Maker baler is an important operation to the farmer with large hay acreage.

Ford Dealers Everywhere Sell Standard Fordson Equipment

Farmers' Union Opposes Abolishing Direct Primary—Page 9

WESTERN Farm Life

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AUG 17 1922

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Points Favoring Merchant Marine

While farm organizations generally are opposing the ship subsidy plan as being advanced in Congress, one outstanding farm leader has expressed himself as favoring the ship subsidy idea. J. R. Howard, president of the American Farm Bureau Federation, gives the following as reasons why agriculture should support a ship subsidy:

1. We are, and for years will continue to be, an agricultural surplus producing nation, which means that we must have access to world markets. The farmer pays the freight whether by rail or water.

2. The farmer is a large purchaser of manufactured commodities, in which water transportation is an important cost factor.

3. The world's economics have been reversed in the past five years. We cannot depend on ships of other nations to carry our goods in the future as we did when we were a debtor nation. An American Merchant Marine is a national marketing necessity.

4. Experts generally agree that a merchont marine cannot be had at this time without special aid or so-called subsidy such as is granted other industries. The protective tariff is a subsidy to manufacturing, in no sense different in principle from a tariff on ocean shipping called a subsidy. It is inconsistent to support the one and not the other. England and Japan long have had ship subsidies, as did we during the first fifty years when we dominated ocean trade. Aside from tariffs we now have many governmental subsidies, such as irrigation projects in the West and boll-weevil appropriations in the South.

5. There is at present absolutely no means of controlling international ocean rates on shipping. An American ship owner may register his ships under any flag. There are now established international rates by ship owners, known as conference rates, which no government can control. Big ship owners use what they term "fighting ships" to underbid and undermine the small independent ship owner who refuses to abide by these conference rates. A ship subsidy is the only means aside from government ownership to maintain any semblance of supervision or control of ocean rates, and any bill providing for subsidy should also carry this power over rates.

6. The more than 1,400 ships owned by the government will be disposed of. They will go either into the hands of a big so-called Wall Street pool, or into the hands of many independent owners. The independent owners will not take hold of these ships except through protection or subsidy. The subsidy then is a protection against Wall Street domination.

7. Any merchant marine bill should look toward the building of new lines of shipping from all economically available ports, and every effort should be made to sell ships to owners in every port territory, thus preventing congestion as well as financial domination.

8. Highway, railway and marine transportation should be co-ordinated in service and through billing provided at proper rates, but the cost of each branch of service must be based on its own costs to prevent monopolistic control.

9. An American Merchant Marine is absolutely necessary from the naval standpoint, if we maintain the 5-5-3 ratio agreed upon at the recent Disarmament Conference. The late war proved that a navy is useless without merchant ships to carry coal.

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Western Farm Life

A Western Magazine for Western Farmers and Stockmen

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Farm Visiting Tour Demonstrates Improved Methods

HUERFANO COUNTY FARMERS LEARN VALUE OF CONSERVING MOISTURE

George C. Wheeler.

MOISTURE conservation, use of purebred seed of adapted varieties and growing well-bred livestock to convert the crops into marketable form are combinations making for success in farming on the upland sections of northeast Huerfano county, Colorado. On the six or more farms visited on the inspection tour conducted by the County Purebred Seed Growers' Association, July 11, abundant evidence was furnished of the truth of this statement. Reserve supplies of corn were seen on practically every farm, wheat on summer fallowed land was showing a condition indicating yields of twenty-five bushels to the acre, while stubbled-in wheat was an absolute failure; cattle and hogs were grazing on pastures of Petgus rye and yellow blossom sweet clover, and newly set trees were showing thrifty growth.

A dozen cars and some forty or more farmers made the trip, which was supervised by County Agent S. L. Owens. The Walsenburg Chamber of Commerce co-operated in supplying transportation for those without cars who wished to make the trip. The territory covered was what is known as the Turkey ridge and Apache communities northeast of Walsenburg, all being farmed without water other than the natural rainfall which averages from sixteen to twenty inches annually.

Field of summer fallow wheat on Jacob Klein ranch.

Grows Corn Every Year.

The first place visited was that of O. A. Scott, who has never produced less than twenty bushels of corn to the acre in the seven years he has been farming on this farm. He grows nothing but Minnesota 13 and showed a field of eightq-five acres standing waist high and some stalks showing tassels. In explaining his methods, Mr. Scott said that he listed the land in January and February and split the ridges in May when the corn was planted. He planted at the rate of seven pounds to the acre, all saved from certified seed. It had been godeviled and plowed and Mr. Scott was about to go over it again with a final cultivation. Some one asked how often he cultivated. Mr. Scott replied by saying that it depended on the rainfall. If heavy rains came after he had laid it by it was necessary to break up the crust to conserve the moisture. If no rain came it was useless to cultivate. He drags old mower wheels between the rows when it becomes necessary to break the crust after the corn is too high to cultivate. Some thought the stand was too thick, but Mr. Scott maintained that with thinner stands the crop suckered badly, which used up moisture and did not produce ears on the extra sucker stalks. His ideal was a stalk every sixteen inches. Fully 1,500 bushels of corn yet remained on this farm and 2,000 bushels had been fed.

Thrifty fruit and shade trees were growing on this place. "All you have to do to grow trees is to set them out in well prepared ground and give them a chance," said Mr. Scott.

Hogs Bring Profit.

Summer farrowed pigs supply the market for corn. Some sixteen or eighteen typy Duroc Jersey brood sows, mostly gilts, were approaching farrowing time. Mr. Scott keeps over only four or five mature registered sows to keep up his stock. He finds it greatly reduces the expense of pork production to fatten and sell most of the sows after the litters are weaned, depending on gilts from his best sows for next year's crop. He had sold about forty-five hogs earlier in the summer.

Petgus Rye Makes Good Pasture.

On the George S. Neibuhr ranch the visitors were impressed with the pasture of Petgus rye. A growth of sweet clover had been plowed under in April and the rye seeded at the rate of fifty pounds to the acre. Since June 4 it had pastured seven registered Jersey cows, five hogs and two or three horses part of the time. A bad crust formed before it was all up and Mr. Neibuhr harrowed it with a tractor. This rye seems much superior to the common rye for pasture. It will live over the winter and produce pasture again next spring.

Some very thrifty plum, apple and cherry trees were seen. A shot of dynamite had been set off for each tree to break the hardpan subsoil which is underlaid with sandy soil.

A patch of Grimm alfalfa was seeded in rows in April, 1920, on the Neibuhr place. Last year it produced two cuttings amounting to a ton to the acre of hay. This year additional seed had been sown and as it started between the rows the cultivation was omitted. The young alfalfa had perished, however, and weeds were taking the space between the rows of established alfalfa. Mr. Neibuhr also successfully raises corn. We were shown an excellent registered, big-type Poland China sow and three gilts, all with young pigs, thirty-four in the four litters.

Success with Sweet Clover.

At the farm of D. Ouderkirk, the next stop, more hogs were seen, a bunch of thrifty Poland China shoats, also a crib of corn and a most promising field of growing corn. The thing which attracted the most attention was a field of yellow-blossom sweet clover. This was sown the spring of 1922 and since June 9 the three and a half acres had pastured seven cows and twenty-five shoats. Many of the plants were blossoming and Mr Ouderkirk thought it would mature enough seed to reseed itself. The stock apparently like this variety better than the white blossom variety, for the few stray white-blossom plants were not being grazed down. Petgus rye also had been seeded for pasture and some additional patches of the sweet clover. The milk cows were doing exceptionally well on the sweet clover pasture. Mr. Ouderkirk said he had tried changing the cows to wild grass pasture and then back to the sweet clover and the cows gave about four gallons more milk a day on the clover.

Another source of profit on this farm was the turkeys. Last year Mrs. Ouderkirk sold $400 worth of turkeys and had a large flock on the way for this year's market. Turkeys were seen on all the farms visited, in fact, it was stated that the name Turkey ridge was given to this community because every one raised turkeys.

Lunch came next on the program. The spring at Huerfano station on the railroad with its grove of shade trees and stream of clear, cold water, was an ideal spot for a picnic lunch and those on the tour were reluctant to start for the afternoon schedule of visits, but Mr. Owens annuonced that we were behind time and that there were some valuable demonstrations in summer fallowing on the program for the afternoon.

On the W. A. Davis ranch the headers were at work and already had harvested most of the wheat on the summer fallow land. The party made no stop, merely noting that the summer fallow wheat still standing was decidedly better than that alongside where the summer fallow method of storing up reserve moisture had not been followed. On the adjoining farm of Jacob Klein the harvesting had not started and the party took time to carefully inspect the condition of the crop grown under the two different methods.

Winning With Summer Fallow.

Mr. Klein has been growing wheat on this farm for seven years but up to this year had not had enough land in cultivation to make much of a showing. He has been developing the farm and each year has been adding to the tillable land. He had one sixty-acre field of summer fallow wheat which good judges thought would thresh out twenty-five bushels to the acre. All agreed that the past season had been unusually dry in that section. Although a firm believer in the necessity of adopting the summer fallow method, Mr. Klein took a gambling chance last fell and put out 150 acres right alongside his summer fallow field by simply disking the stubble and drilling in the seed. He didn't want to talk about that field, or even think about it, for it was a total failure. "And I put a lot of expense into that field," said Mr. Klein, "and that is what I get, absolutely nothing." Over on the other side of the fence Mr. Klein was doing what his better judgment told him was the only safe way to grow wheat, and that was to store surplus moisture and not plant wheat in a soil with no reserve. This 150 acres was plowed deep in May and June and was clean and free from weeds. Mr. Owens' soil augur showed moist soil down twenty-six inches, which was as deep as he tested it. A similar test in the field of wheat grown on the land tilled last summer showed almost no moisture except a little on the surface, the result of a little shower a few days previous. The men who saw this demonstration

Members of Huerfano County Seed Growers' Association on inspection tour.

(Turn to Page 11)

Market Outlook for Farm and Ranch Products

EUROPE NEEDS WHEAT SURPLUS OF UNITED STATES AND CANADA

Edited by Glenn G. Hays.

ALTHOUGH a few clouds have gathered on the horizon recently, most of the business barometers continue to forecast favorable weather.

The building boom is the biggest ever known and a long string of related industries such as lumber, hardware, cement, paints and oils are sharing in its benefits.

The iron and steel industries are operating at above the pre-war level. Boot and shoe manufacturing, clothing, furniture, implements and drugs and chemicals all show improvement over last year according to comprehensive surveys.

Unemployment at Low Level.

As a result the amount of involuntary unemployment has dropped down to the lowest level since the depression started and a shortage of skilled labor in certain lines and of unskilled labor in certain districts is reported.

With the turn of the tide, business failures have dropped off, the number in June being the smallest since last September and total liabilities lightest since October, 1920.

The demand for loans has increased in industries which show most complete revival but, speaking broadly, the supply of capital is increasing more rapidly than the demand for it, so that interest rates are easing. Mortgage money is more abundant, savings deposits are rising and the demand for investment securities, as measured by the price trend of Liberty bonds, most of which sold at new high levels last week, is increasing.

About 700,000 men are out of work in the coal strike, which started fifteen weeks ago, and stocks of coal are getting low enough to occasion alarm as to the maintenance of industrial operations. The Federal government is taking a hand, however, and the prospects of settlement are becoming brighter.

Strike Reduces Demand for Products.

The strike of rail shopmen takes an additional 400,000 men from the payroll and reduces buying power for farm products by that much more. It is too early to form any satisfactory notion of the outcome of this clash.

The worst of recent developments was the evidence of a near collapse of the German government and the headlong plunge of the mark to a new low figure of over 550 for one dollar, compared with slightly over four to a dollar in normal times.

Until foreign political and financial affairs become more settled, export trade in wheat, corn, cotton, hog meats, lard and other farm products will be restricted. Besides Germany the countries most affected will be France, Belgium and Italy, which were counting upon large reparation payments to help solve their own financial woes.

Good Cattle Market Continues.

Cattle markets have continued to absorb the supply at prices favorable to the producer. Prime steers sold at $10.80 at Chicago last week and a large number crossed the $10 mark. The actual advance was confined to grainfeds, but grassers and those fed corn on grass which have been too high compared with top grades, were firm at Chicago and only small declines were in vogue at other points.

Steers from the northern ranges are beginning to show up and the movement from Kansas and Oklahoma is steadily gathering volume. The supply for slaughter will probably increase 35 per cent in the next sixty days, so that it is doubtful if values on the lower grades will be maintained, although settlement of the coal strike would expand outlets for beef. Choice and prime steers are in a class by themselves and appear to be in a secure position by virtue of scarcity, although the advance may not carry much further.

Big Feeder Demand Expected.

The prospect of a generous crop of corn, hay and rough feed with profitable results for cattle feeders in the last five months, and advancing prices on fat steers, promise to maintain a broad outlet for thin cattle during the fall. July curtailed buying as usual, the movement from twelve leading markets in the first week in the month declining 50 per cent, compared with the last week in June. As more range steers become available and the busy season passes, buying will expand, but it probably will not lift values much if any and the plainer light weights are apt to work gradually lower during the late summer and fall.

Hog Market Reacts Again.

The hog market crossed the $11 mark last week, reaching $11.15 on July 12, but the run expanded and the advance was lost. Receipts are holding up surprisingly. Conditions in Germany are unfavorable for the export trade in hog products, although a big Chicago packer displayed his faith by starting a big shipment for that country during the week and other continental countries were buying. Heavy foreign buying of hog meats and lard and lighter receipts of hogs are the two factors which generally boost the market during the late summer.

The spread between common packers and choice bacon hogs is about $3 at Chicago and still wider at other points. In spite of a drop in average quality and lower average prices the latter are holding above $10 at the principal Middle Western markets, making an unusually profitable outlet for corn. As production is being increased rapidly it has been suggested by officials of the Department of Agriculture that it would be well to dispose during the summer of part of the sows bred for fall litters in order to prevent overproduction.

Feeder Lambs Look High Priced.

Receipts of range lambs are not quite up to the usual number at this season, probably reflecting the 30 per cent shortage in the crop.

Purchases of feeder lambs are expanding and the range supply has not been sufficient thus far to fill the orders. Prices being paid are high for this time of the year and look rather risky.

Wheat Supply Same as Last Year.

Spring wheat failed to come up to trade expectancy so that the government's forecast of a total wheat crop of 817,000,000 bushels was slightly below the unofficial estimates. It is 22,000,000 bushels more than last year and 18,000,000 bushels more than the average from 1916 to 1920.

Farm reserves were 31,641,000 bushels, which with stocks in country mills and elevators unofficially estimated at 16,000,000 bushels, and Bradstreet's visible supply now makes a total carryover of 68,000,000 bushels. Added to the new crop estimate the total supply for the coming year would be 885,000,000 bushels, compared with 887,000,000 bushels last year.

Conditions in the spring wheat states are most favorable, although there has been a little damage from black rust. Canada's crop is estimated officially at 338,000,000 bushels, compared with 301,000,000 bushels last year and the largest on record with one exception.

Receipts of new wheat showed a further increase last week. They were regarded as light in the grain trade, but with one exception were the heaviest for the corresponding week in seven years. They were absorbed without trouble as export buying revived slightly, former sales for export were being filled and mills are taking the first run of new wheat rather freely.

The market is still unsettled, awaiting the outcome of the rail strike, foreign political and financial conditions, the black rust scare, the size of the export and milling demand, and also for the movement of new wheat to reach flood tide.

European Needs Are Large.

The weather in France, Germany and Great Britain has improved lately, but a big increase in European needs in the next twelve months over last year is indicated. Italy, whose crop is 29,000,000 bushels less than last year, has removed the duty on wheat imports and France has authorized a larger list of wheat substitutes. This increase will be partly offset by smaller shipments to Oriental countries and possibly by a larger rye surplus from Canada and the United States. The Chinese crop is reported at 175,000,000 bushels, compared with 150,000,000 bushels last year.

Based on present indications, importing countries will need about 60,000,000 bushels per month throughout the year. But little has been bought for fall shipment as the European harvest is on and buyers are in position to wait until the North American crop is moving in heavier volume. Unsettled foreign financial affairs and unfavorable exchange rates also tend to delay purchases. If the estimates upon import needs are correct, importers will be compelled to buy around 425,000,000 bushels from North America in the next eight months, which will take care of most of the surplus in the United States and Canada which now appears to be approximately 485,000,000 bushels.

Corn Acreage Slightly Reduced.

The area planted to corn was estimated officially at 103,234,000 acres, compared with 103,805,000 acres last year, a decrease of .6 per cent. The yield was estimated at 2,860,000,000 bushels, a decrease of 220,000,000 from the final yield in 1922. With the heavy exports and rapid domestic disappearance in the last eight months and a reduction in the crop as large as shown by the government's forecast, the total supply for the next crop year would be about 400,000,000 bushels less than for the present crop year, although still larger than the average. The crop is believed to have improved since the date of the government report.

Severe Loss in Oats Crop.

The government's estimate upon the oats crop was 1,187,000,000 bushels, showing a loss of 118,000,000, or 9 per cent, during June. Recent rains and cool weather have improved prospects to some extent, but a crop below the average of 1,250,000,000 bushels looks probable. (Continued on Page 5)

Recent Range of Livestock Prices at Our Principal Markets.

Cattle—	Denver.	Kansas City.	Omaha.
Choice and prime heavy steers (1100 lb. up).	$9.35@ 9.90	$9.75@10.30	$9.65@10.50
Good heavy steers	8.60@ 9.50	9.00@ 9.85	9.25@ 9.90
Common heavy steers	6.25@ 8.00	6.75@ 8.25	7.50@ 8.50
Good light steers	8.40@ 9.35	8.75@ 9.70	8.50@ 9.65
Common to choice butcher heifers	5.00@ 8.60	5.35@ 9.00	5.50@ 8.50
Common to choice butcher cows	3.75@ 7.50	4.00@ 6.75	4.25@ 7.50
Bologna and beef bulls	2.75@ 6.00	4.10@ 6.00	4.00@ 6.75
Canners and cutters, cows and heifers	2.00@ 3.75	2.25@ 4.00	2.50@ 4.50
Canner Steers	3.00@ 4.25	3.25@ 4.75	3.25@ 4.50
Common to choice feeders (1000 lb. up)	5.00@ 6.50	6.35@ 8.50	5.75@ 8.15
Common to choice stocker steers	4.50@ 6.25	5.00@ 8.30	5.50@ 8.00
Common to choice stocker cows and heifers.	3.00@ 5.00	3.35@ 6.00	4.00@ 6.00
Hogs—			
Top of Market	$ 10.75	$ 10.70	$ 10.65
Bulk of Sales	9.25@10.60	9.25@10.65	7.75@10.60
Heavy (250 lb. up)	9.00@10.25	9.10@10.50	9.00@10.50
Medium (200—250 lbs.)	9.50@10.50	9.85@10.65	10.00@10.65
Light (150—200 lb.)	9.50@10.50	9.75@10.70	10.15@10.65
Smooth packing sows (250 lb. up)	8.00@ 8.25	8.00@ 8.50	8.00@ 9.35
Stock pigs	9.00@10.00	9.25@10.75	8.75@10.25

Stockmen Make Use of Forest Ranges

LIVESTOCK IMPROVEMENT BROUGHT ABOUT BY REGULATIONS IN FORCE.

John H. Hatton.

INTERMIXED with the stands of timber on the forests of Colorado are many parks or open places covered with a heavy growth of forage. There is also much grass and other forage plant growth in the timber where the tree growth is not too heavy. Most of this forage can be grazed by stock without injury to the timber. Some areas are closed to grazing in order to protect the slopes of streams, which furnish municipal water supplies, and other areas, rock slides, etc., are barren of any forage growth.

About ten million acres of the thirteen and one-quarter million acres in the National forests of Colorado are used for pasturage, and feed for the summer over 30 per cent of the cattle and 5 per cent of the sheep owned in the state. During 1921 this area supported 369,000 cattle, 8,700 horses and 987,300 sheep grazed under paid permits. This was considerably less than in 1920, because of the depressed condition of the stock industry and lessened demands. The average grazing season for cattle and horses is about five months and the fee for this period is 50 cents a head for cattle and 62 cents for horses. The average season for sheep is about three months and the fee is 8¼ cents a head. Sheep are grazed in the extremely high portions of the forests, where the snow stays until the latter part of June and begins falling in September.

About 5,300 cattle and 3,900 horses were grazed free under a regulation which provides for grazing free not to exceed ten head of work and milk stock in actual use by settlers, prospectors, etc.

Eradicating Poisonous Plants.

Certain poisonous plants on the range kill stock, but it has been found that about 90 per cent of this loss can be prevented by digging or grubbing the principal poisonous plant, which is larkspur. During the latter part of 1915 definite grubbing of larkspur was begun in Colorado. Since that time about 4,760 acres have been grubbed, at a cost of approximately $4.25 per acre. It is estimated that this work effected a saving orf $27,650 to the livestock industry of the state during the past year. Past experience has shown that it can be expected that this amount will be saved annually on the areas where grubbing has been carried on.

Improvement on Ranges.

The construction of range improvements that are at present in use on the National forests of Colorado consists of: Fences, 386 miles, value $50,600; corrals, forty-two, value $2,410; improved stock driveways, 603 miles, value $16,850; stock bridge, one, value $500; water developments (improved springs) 135, value $3,700.

Better Breeding Regulations Effected.

The permittees using the ranges on the National forests of Colorado are encouraged to form stock associations. There are about one hundred local stock organizations in the mountainous sections of the state. On eight of the fifteen forests of Colorado the permittees in stock associations have passed resolutions requiring that only purebred bulls of beef types be run on the ranges for which these associations are recognized.

Range Surveys Being Made.

Intensive range reconnaissance to determine just what forage the forests are growing has been carried on in several places, in order that the range may be stocked to the full carrying capacity without damage. More than 1,134,877 acres have been covered by this intensive investigation.

Game animals are always interesting and the Forest service game census for 1921 shows there are in the National forests of the state approximately 19,696 black-tailed, or mule deer, and forty-two white-tailed deer; 6,056 mountain sheep and 6,191 elk; 457 mountain lions; 185 gray wolves, and 26,860 coyotes; 2,696 black bear, 33 grizzlies; 6,698 lynx and other cats, 3,484 foxes, and 40,792 beaver. Four million nine hundred forty-nine thousand fish fry were planted by the forest officers in the state in 1921.

Touring North Park Where Beef Is Made on Grass

STOCKMEN DISCUSSING SUNFLOWER SILAGE, ALFALFA AND OTHER CROPS

Alvin T. Steinel.

NORTH PARK, Colorado, is a world of its own. Surrounded by high mountain ranges, extremely well watered, its succession of long, sage-covered ridges and grassy valleys would indicate an agricultural paradise. And it would be, except for the elevation which averages around 8,000 feet above sea level, making farming uncertain, because of the likelihood of frost at any time during the three summer months. Beef production is the one big industry and grass the one crop that makes it possible and profitable.

Nowhere in the Rocky Mountain region is nature's balanced ration—grass—more abundant, or more nourishing. For many years North Park has been famous for its grass-fed cattle. Blue ribbons have been won at the International Stock Show in Chicago on carlots which came off North Park grass ready for slaughter. And as for feeders—well, the annual auction sales tell the story in figures of how the cornbelt farmers prefer the stuff that was nourished on the grass of the high altitude country.

These cattle, showing the best of beef breeding and conformation, produced on grass alone.

Well Bred Cattle Grown.

Nor is the grass everything, when describing North Park cattle. These thick-bodied, large-scaled, well-fleshed cattle are as much the result of good breeding as of favorable climatic conditions. Purebred sires are the rule and Herefords the predominating breed.

Herd improvement has been the rule for years. Purebred bulls are bought in carlots by all the big outfits. Winter feeding is a recognized necessity and there is always hay enough to carry the cattle through the winter. But that isn't all. Lately the stockmen have been seeking ways to make beef more economically. The baby beef question has been discussed. Can cattle be finished in the Park by shipping in grain? Can grain or silage crops be grown in the Park? Must producing feeder cattle remain the principal business? These are questions the cattlemen are asking.

Transportation charges and delays are a handicap to anyone attempting to finish cattle in the grass country which grows no corn and where even small

Alfalfa on North Park ranch of J. R. Edwards. Altitude, 8,000 feet.

grains, such as oats and barley, are generally cut for hay. At first glance it looks like a safe bet to continue to produce grassers and send them to the feed lots in the lower country for finishing. And yet there are progressive ranchmen who contend that North Park can do more toward finishing beef than is being done today.

Stockmen Hold Conference.

This subject was up for discussion at a conference held early in July by a committee of the North Park Stock Growers' Association, the commissioners of Jackson county and representatives of the Extension Service of Colorado Agricultural College, including Director Roud McCann and Dick Jay, Livestock Extension Specialist. One step resulting from this conference was the planning of a feeding contest, each of a number of stockmen to feed out a carlot in his own way, the cattle to be judged and auctioned off next summer. Details of the contest are being worked out. It will take place if enough producers are interested to make it worth while.

In the meantime those interested are turning over in their minds the possibilities for economies in beef production, through pasture improvement, or crops that may be adaptable to the peculiar conditions prevailing in North Park. On a tour of the ranches in company with August Dwinell, one of the pioneer cattlemen of the Park, representatives of the Extension Service of the Colorado Agricultural College saw much of interest and of promise.

Alfalfa Being Tested.

Nothing made more of an impression in the crop line than a field of alfalfa, of three years' standing, on the farm of J. R. Edwards, five miles southeast of Walden. This field was beginning to show blossoms on July 7 and promised to yield at least one good cutting, if not two. The growth was thrifty and the stand thick and even. The field is at an elevation of 8,000 feet on mesa land, once covered with sagebrush. Alfalfa at that elevation is not unusual in other parts of the state, but the general opinion in North Park is that it will not withstand the severe winters, but will kill out.

Mr. Edwards said he did not try to get any special variety when he bought the seed and that his field of several acres had successfully withstood three winters and survived hard summer frosts without serious setback. There is much interest in this demonstration by Mr. Edwards. The stockmen are watching this alfalfa. They realize what it would mean to them to supplement their pastures with a legume hay, even if the cuttings would average only one a season.

"If Edwards can do it we ought to try, too," is the way one stockman put the matter.

Oats, Barley and Potatoes Grown.

Mr. Edwards grows oats and barley and also has had success with potatoes. He has a four-acre field this year of Early Ohios which were looking fine on July 7. Though there had been a heavy frost during the night, the leaves were not affected. He has grown a crop of potatoes every season for seven years and has averaged around fifty sacks to the acre. Many other ranchers grow their own potatoes and gardens are plentiful all over the Park. Edwards is testing alsike clover, brome grass and other useful pasture plants, growing them successfully on a ranch that has no advantage either in soil, water or location over the average in North Park.

Other ranchmen who have tried crops of various kinds have become discouraged because of repeated damage by summer frosts which sometimes reach the stage of a real freeze, forming a thin coating of ice on standing water. Still a careful selection of hardy varieties may provide a fair program of forage and root crops that would be useful in feeding both cattle and hogs. The hogs we saw on the Hansen ranch were doing well. The ranchmen can grow their own pork if they will, and of course they raise chickens.

Improvement of pastures through the introduction of new grasses and perhaps some changes in irrigation practice are lines of demonstration work that seem desirable. Some say that, as a rule, the water is left on the grass too long and that this lessens its nutritive qualities. A more careful application of water and less extravagant use of it, is recommended by some of the ranchmen. Alsike clover has been introduced here and there with success, and the cattle like it.

Testing Sunflowers for Silage.

Silage crops have been discussed. One ranchman at the conference said he wondered whether the grass couldn't be used for silage. It's done in some parts of Europe, at least to the extent of ricking it up in piles under pressure. Sunflowers were mentioned—the giant or Russian sunflowers as they are called. These were tried out on an experimental field under supervision of an agricultural instructor in the Walden school last summer, but a freeze, early in July, killed the young plants. Ordinarily this crop would probably "make" as it requires only seventy to eighty days, and is not susceptible to the ordinary frosts after getting a good start. There are no silos in North Park, but the successful introduction of sunflowers may change this.

Cattle Get Fat on Grass.

What the visitors were most interested in seeing was the beef cattle on their native heath—these cattle that had tasted only grass, either green or cured. It is hard to believe that such steers as we saw were produced on grass alone. No wonder that an Iowa farmer at the International Stock Show some years ago was skeptical when he talked to the late Andy Norell about the North Park grass-fed cattle. The Iowan said it was impossible to put such a finish on cattle without corn. Norell insisted and to prove his point he got a sack of shelled corn and threw some handfulls into the pen. The steers didn't touch it; they had never seen anything like it in the way of feed and didn't know what corn was.

Some twelve or fifteen miles southeast of Walden we saw a bunch of steers on the ranch of C. D. Johnson, rounded up for driving to the United States Forest Reserve for summer range. There they will remain till fall and then be shipped to an Iowa feedlot for a quick, sixty-day finish on corn. These steers looked good and they had never seen grain.

High-Class Registered Bulls Used.

From Johnson's we were taken by Mr. Dwinell to the William Simpson ranch, near Walden, where we saw a part of the herd in the meadow. Quality and breeding were quite evident in these cattle. It was easy to trace the blood of registered sires from the Johnson Brothers herd at Eagle and the DeWitt herd at Denver.

Next we saw a bunch of steers on the William Jones ranch. He brought them into the corral for inspection and a fine lot of beeves they were. Then on to the Dwinell ranch on the Canadian. This is one of the older ranches, Mr. Dwinell having come to North Park in 1884. He takes just pride in his nine hundred or more head of Herefords—a splendid herd on which he uses registered bulls of the best type. He picks big ones. We saw a bunch of twenty-two of these bulls and they looked like a carlot exhibit ready for the stock show, though they were out in pasture.

On the Victor Hansen ranch we saw not only some good registered bulls, but also the "biggest barn in North Park." It is, in fact, as big as any in the state and high enough so that Hansen, who, like his fellow ranchmen, lives in the saddle, can ride right through it on horseback. The cattle are used to having their wants looked after by a rider and Hansen's Herefords are followed under the roof of the big barn by men on horseback. This ranch fringes the North Platte for a distance of more than seven miles.

Hereford Cattle Predominate.

The only Shorthorns we saw were those of C. B. Harmon, who loves the Scotch cattle, though he also runs Herefords. His Shorthorn herd is purebred and he gave us a chance to go among a lot of as fine breeding cows as we had seen in many a day in the red, white and roans. He also showed us a carload of spayed heifers—Herefords—which were awaiting shipment to market.

On the Hunter ranch we were shown three Hereford steers which had been announced as "the best three steers in the state." They looked it in every line and limb. In fact, we saw as excellent a lot of marketable beef in the day's tour as one could wish to see and the remarkable thing was that these cattle thrived and fattened on grass alone.

Market Outlook for Farm and Ranch Products.

(Continued from Page 4.)

Cash Grain Markets.

The range of cash grain prices follows:

Kansas City—Wheat, No. 2 red, $1.09@1.10½; No. 3, $1.07@1.09; No. 2 hard, $1.10@1.50.

Corn—No. 2 mixed, 57@57¾c; No. 2 yellow, 60½@62c; No. 2 white, 56½@57½c.

Oats—No. 3 white, 36½c.

Barley, 56c.

Only Fair Demand for Alfalfa.

Demand is small for new clover and only fair for new alfalfa. The rail strike is restricting receipts. The new crop is estimated at 107,000,000 tons, compared with a six-year average of 101,000,000 tons.

Prices per ton in carlots:

Kansas City—Prairie upland No. 1, $13@14; No. 2, $11@12.50; alfalfa choice, $17@19; No. 1, $15@16.50; standard, $13@14.50; No. 2, $11@12.50; No. 1 timothy, $14@15; No. 2, $10.50@11.50; No. 1 light clover mixed, $14@14.50; No. 1 clover mixed, $11.50@$13.50; straw, $9@10.

Egg Market Slightly Stronger.

The egg market is regaining strength although prices have not advanced much. Receipts are larger than at this time a year ago, but there is only a small surplus over consumptive needs to be placed in storage. Latest quotations:

Denver—Eggs, 28c. Live poultry—Hens, 20@22c; springs, 35c; broilers, 36@38c; roosters, 7c; turkeys, 27c.

Butter Market Weakens.

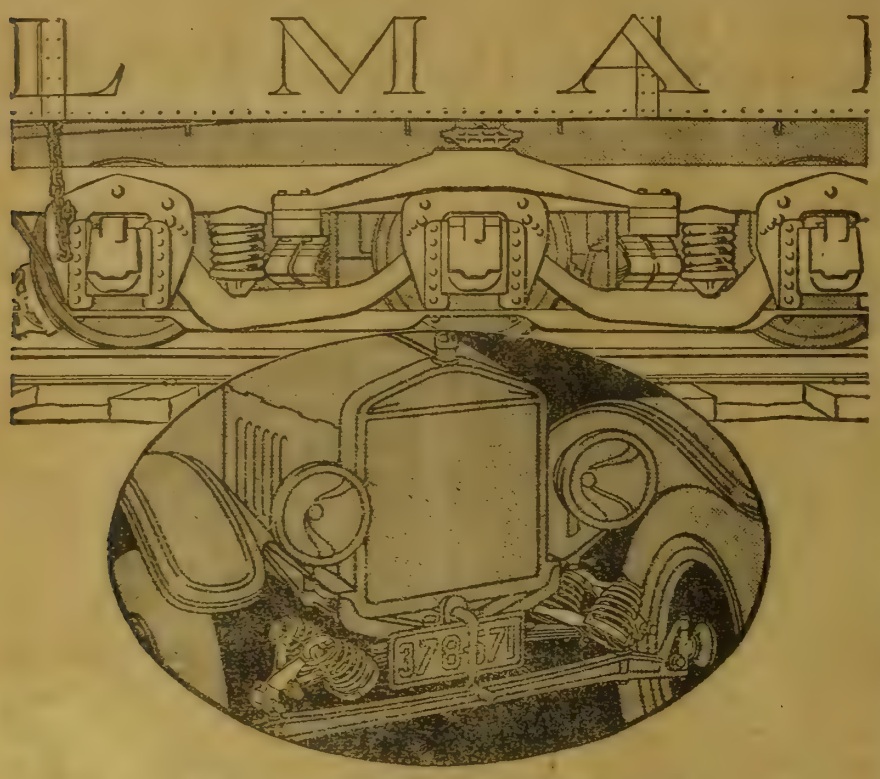
Butter scoring 90 or below has moved indifferently recently and prices have declined lower, while fancy butter is slightly higher. Export buying was expected but it failed to develop, as British markets weakened. Receipts have been falling off, but rains have revived pastures and an increase in production is expected or prevention of a further decline for the time being. The daily surplus for storage at the four leading markets remains rather heavy, but the total storage surplus is not yet excessive. Prices for 92-score fresh butter on July 18 were:

Chicago, 34c; New York, 36c! Boston, 37c; Philadelphia, 37c.

Large Potato Crop.

The potato crop was officially estimated as of July 1 at 429,000,000 bushels, compared with 347,000,000 bushels last year, and an average of 373,000,000 bushels during the preceding five years. If this year's promise is fulfilled it will be the third largest crop on record.

The apple crop was estimated at a total of 190,000,000 bushels, with a commercial crop of 31,400,000 barrels. The boxed apple states have a slightly smaller crop than last year, while the barreled apple states have a much larger crop. Shipments of new apples to July 10 were 1,366 cars, compared with 128 cars to the same date last year.



Notice the next Pullman car you see has leaf springs, combined with coil springs. The leaf springs are slow acting; they take up the long rolls in the track. The coil springs are quick acting—they take up the little jounces, jolts and vibrations at the ends of the rails. The coil springs also cushion the side roll when the car hits a curve. Your Hassler equipped Ford has an exactly similar spring combination plus the important rebound check!

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Have You a Silo?

There are in round numbers 500,000 silos in the United States. They are found in every state in the Union and in nearly every county. This proves that the silo can be used successfully in practically all parts of the country. The man who is keeping livestock can well afford to devote some thought and study to this silo question.

The silo is most numerous in the leading dairy states, but many states and communities are backward in taking advantage of this economic means of feeding cattle. Wisconsin ranks first as a silo state, with close to 85,000 on 190,000 farms. New York is second, with 50,000 on about the same number of farms. Still, those familiar with conditions in Wisconsin and New York admit that they are less than half supplied, and that even three times more silos could be put into valuable and economic use. Great dairy states like Minnesota, Iowa, and Ohio, are very short of silos compared with Wisconsin and New York. Then there are many other states east and west, north and south, that do not have one where they really need ten.

Silage has been so thoroughly tested out from an economic feeding standpoint that most of our experiment stations have considered it a closed question. There are few states in the Union that have not printed bulletins and feeding tests all of which show that silage is an economic feed for milk, beef and mutton. As to the amount it saves the feeder, no definite figures can be given, for prices of feed, labor and commodities vary with each year and in every state. It is safe, however, to conclude from the tests that have been made that at least ten cents can be saved on a pound of butter, 40 cents on 100 pounds of milk, and $1 on 100 pounds of beef. With such a saving surely this subject is a live one for every stock-keeper in this country.

Silage for young stock and growing animals is quite as valuable and important as it is for those that are producing milk or beef. Horses at rest, brood mares, colts and mules, can be fed silage with economy. The 500000 silo users of this country are perhaps the best experiment relating to the value and economy of the silo, for they have tested out its worth and know of its value and advantages on the average farm. The dairy industry has prospered during the past few years, and many farmers are increasing their herds. They will find the most expensive part of the business is that invested in the feed bill; in other words, to feed a cow is the most expensive item connected with the business and the silo is one of the first matters to consider for economical production and to give a succulent nutritious ration that can be drawn upon any time during the year.

The silo plays an important part in the process of turning the cheap forages of the farm into condensed marketable produce; and especially at this time of high transportation costs we will do well to engage in a line of farming that will condense our raw materials. We are especially interested in shipping a finished product, especially if the market demand is favorable. The silo has come and is still coming to the farmer who aims to utilize his products to the best advantage, who wishes to get the most from his acres and prevent a waste of roughage which has been so expensive in past years.

The silo is answering the pasture problem, for silage is the cheapest source of pasture. It is a labor-saving device, for it offers at all seasons a supply of forage close at hand. It can be easily and quickly transported to bunk or manger, and is relished by practically all classes of stock. It is rich in carbo-hydrates, it is succulent, and makes a balance for high protein feeds or fodder.

The livestock farmer will do well to figure carefully the answer of the question "Have you a silo?" He can secure plenty of information from silo owners. Our experiment stations can furnish him volumes of data, and there are many other sources from which to draw reliable figures. Too often the man who is considering this subject listens to the man who does not own a silo. From an investment standpoint it will figure out close to 100 per cent under many farm conditions. Even if it figured 10 per cent, would it not be a wise move?—A. L. Haecker.

Only the ordinary man is put down and out by ordinary difficulties the other kind sees in a profitable task only the chance to show what kind of stuff he is made of.—L. C. Ball.

Kanred Wheat Rust Resistant.

Kanred and two similar varieties were the only winter wheats out of about 100 varieties and strains that proved to be resistant to black stem rust in tests made at Manhattan, Kan., by the United States Department of Agriculture in co-operation with the Kansas Agricultural Experiment Station. One other pure-line strain, Kansas No. 2390, wes found to be partially resistant. Practically all the wheats tested were winter varieties, and with these few exceptions they were affected by the rust. The work was done in a rust nursery, located on the experiment station farm. Infection was probably as great as the varieties would encounter under field conditions.

Several varieties of spring wheat proved rust resistant, Black Persian being the only one belonging to the bread-wheat group. A few durum or macaroni wheats—Beloturka, Iumillo, Kubanka, Monad, and Pentad—and one hybrid, resembling the durum parent, showed definite signs of resistance to stem rust. All emmer and einkorn strains gave some evidence of resistance.

Tests made in the greenhouse gave almost the same results as were obtained in the field nursery, except that Kansas No. 2390 showed no resistance. Einkorn also was non-resistant under these tests. Conclusions should not be drawn from greenhouse tests alone.

Reports from Alabama, California, Illinois, Iowa, Missouri, Nebraska, New York, Wisconsin, and New South Wales indicate also that the three varieties of winter wheat are resistant to stem rust in those states, but in Minnesota and South Dakota they have not been found to be so, probably because of the occurrence of distinct strains of stem rust there.

Knowledge of the leaf-rust problem indicates that these varieties as a rule are very resistant to this form of rust also.

Kanred has an unusual combination of desirable characters, including high yield, early ripening that escapes drought and hot wind damage, and winter hardiness. In milling and baking qualities it seems to be equal to the best wheats, such as Turkey and Kharkof. It is adapted to parts of the hard winter-wheat area other than Kansas and is now rapidly being introduced and widely grown in Oklahoma, Texas, Nebraska, eastern Colorado, and in some other states. It is not adapted to humid areas where soft wheats are grown. This variety also is believed to have potential value as a parental variety to be used by plant breeders in combining its rust resistance and other valuable characters with varieties of other classes of wheat adapted to the several wheat-growing districts.

The results of these experiments have just been published in Bulletin 1046, "Rust Resistance in Winter-Wheat Varieties," which may be obtained free upon application to the Department of Agriculture, Washington, D. C.

Great Highways System Planned.

A system of highways that will serve the whole country and will be far superior to any other in the world is being mapped out by Federal and state engineers. It is estimated that the system will comprise 180,000 miles of road. The Federal highway act recently enacted specifically requires that all Federal aid be spent on a connected system of highways consisting of not more than 7 per cent of the road mileage in each state, and that this system shall consist of interstate or primary roads and intercounty or secondary roads.

Proposed systems have been received by the Bureau of Public Roads of the United States Department of Agriculture from all but eight states. They are plotted on a large map of the United States and carefully examined as to co-ordination with the roads of adjacent states and service to all sections of the country. Where co-ordination is not satisfactory conferences are held with all interested state highway officials and routes adjusted.

Many states have already adjusted difficult problems with their neighbors. As an example, the system sent in by Nebraska showed a big gap in an important road along the northern boundary. It was learned, however, that South Dakota would follow with a system that would fit like pictures on toy blocks. Since the Federal highway act of last November became a law, only roads certain to be on the system have been approved for construction.

If in need of advice, ask Western Farm Life Service Bureau.

Summer Fallow Secret of Success.

My farm comprises 320 acres, 200 of which I cultivate. My crops consist principally of winter wheat, oats, fall rye, and cane.

My methods of planting and cultivation are as follows: I believe Montana soil is second to none in its ability to retain moisture, a factor that is of vital importance to the plains farmer. I summer till 100 acres each year. The proper depth to plow will depend on the kind of soil, time of plowing, and the work you expect to do after the plowing. With the average Montana soil, I find on old ground 7 inches is about the right depth. The plow should be followed closely with a sub-surface packer and harrow. The sub-surface packer is just what its name indicates, one that will pack the sub-surface, that is, the lower part of the furrow slice and at the same time leave a loose mulch on the surface. This is the ideal condition.

After the field has been treated as outlined above, it should be harrowed during the summer and fall as often as is necessary to keep all weeds down and maintain a mulch. The exact time to harrow can be determined by examining the field. If there are no weeds showing and the mulch has not been settled by rain and the firm soil beneath the mulch is still moist, there is no need to harrow, but do not conclude that because these conditions exist today they will be the same a week later. Watch the field closely and just as soon as weeds or plant life of any kind begins to show, or heavy rains have caused a crust to form on the surface, no time should be lost in getting over the field with the harrow.

Another condition which demands attention is sometimes found during a long, dry, hot spell, when even though there may be no weeds and the mulch is in good shape, yet, owing to the extreme heat, the firm soil beneath the mulch will be found to be getting dry, and if neglected will form a crust which will permit the moisture to escape and also shut out the air.

Get the summer tilling habit and obtain success in your farming operations. In addition to this, do as I do—supply your farm with plenty of chickens, cows and hogs. Then watch your bank account grow. I keep about 200 hens, six brood sows and fifteen splendid milk cows. I deliver my cream a distance of forty miles with my Ford truck. My chickens I give the very best care, for they more than pay the grocery bill. From my hogs and cows, I get a splendid profit which helps to swell the roll in the bank.

In conclusion, will say that summer fallowing is the key to successful farming on limited rainfall, and as a side line keep all the chickens, cows and hogs that you can care for, and your financial star will slowly but most assuredly ascend.—J. E. Dolson, Montana.

Editor's Note—This is one of the series of articles by farmers on "How I Am Making Money on My Farm."

Tractor Record Book.

Do you operate a tractor? If so, are you keeping account of the cost of operation? If not you may wish to do so, hence the tractor record book, furnished free on application to the Extension Service, Colorado Agricultural college at Fort Collins, will be helpful. This is a substantially bound booklet designed for keeping a complete record of the use of the machine. The opening page has ruled space for entry of data on make of tractor, rating, time of purchase; the price, location of farm; soil type, crops and acreage. After this preliminary data there are blanks on which the cash operating record is kept and then follows the daily operating record, which includes kind of work, machinery used or pulled, width and depth of plowing, amount of fuel; amount of oil, amount of grease; number of men, hours at work, acres and distance covered and other details. On the last page all of this data may be conveniently summarized, thus ascertaining accurate costs per hour and per acre of the season's work with the tractor.

There will be a real Wild West show every day during the 1922 Colorado State fair, September 25—30. It will be the first time this has been put on at the Colorado show, and the commissioners are determined that it shall be the best ever pulled off in the west. One of the most noted Wild West show managers in the entire country has been engaged to manipulate this show, and he promises that everything ever seen in such shows, and a number of brand-new features will be presented.

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Better Livestock Reporting Service.

Livestock producers have been handicapped by the lack of an adequate livestock reporting service covering the producing sections and also giving information as to consumptive demands. A livestock reporting service is now being worked out for the range states by the newly organized Bureau of Agricultural Economics of the United States Department of Agriculture in co-operation with producers and their organizations. The conference held in Denver recently resulted in considerable progress being made toward working out a plan for getting the desired information. The one weak feature was the rather small attendance of actual livestock producers. The Associate Chief of the bureau, Leon M. Estabrook, was particularly desirous of having all the help possible from livestock men in working out the new service, for without their hearty co-operation the best of plans will not work. This new service is made possible through a recent act of Congress providing the necessary funds.

We would urge a careful consideration of the effort being made to help livestock producers in a more efficient and business-like handling of the industry. Reliable information covering every phase of the industry is of the greatest importance.

Tentative plans for a system of reports were drawn up at the conference. For each month of the year movement reports obtained from the railroads and stockyards will be made. In January an annual report will give numbers of livestock of the various ages and classes on the farms and ranches of the country, including estimates of numbers in feed lots. Through the year there will be seasonal reports on livestock conditions, such as the estimated supply of cattle for spring delivery from the southwestern range states, the estimated spring lamb crop from California and other spring lamb states, estimates of cattle that have gone into pastures of Oklahoma, Kansas, and other northern pastures, estimates of grass cattle likely to come to market, the spring calf crop in the mountain states, supplies of stockers and feeders, both sheep and cattle, available in the fall months.

The plan in general, as developed at the conference, includes a division of the range country into producing sections, each with a livestock expert in charge to assist in gathering the information for the reports. The information as gathered will be held strictly confidential by the bureau and sent out as outlined above. Information relating to market conditions, supply and demand of all livestock and general statistics in the livestock industry, will form the basis of the work.

Studying Agricultural Economics.

Studying the business side of farming will be given a great deal more attention than in the past as a result of the creation of the Bureau of Agricultural Economics in the United States Department of Agriculture, which officially came into existence July 1. Every thinking farmer realizes that the business side of farming has lagged behind the production side. This new bureau will take up a scientific study of all that has to do with the business of farming. It will go into the statistics of production and will gather information on the outlet for farm products the world over. More attention will be given to the marketing of farm products. Livestock farmers will appreciate the value of help along this line in the handling of their products, for in the past they have had even less reliable information upon which to base their operations than the grain farmers. Our leading agricultural colleges are recognizing this weakness of our agricultural industry and also are developing departments for instruction and research along economic lines.

Farmers Lose—Steelmakers Win.

It has been estimated that farmers contribute from $25,000,000 to $30,000,000 a year to steelmakers as a result of what is known as the "Pittsburgh plus" practice of fixing prices on steel. James R. Howard, president of the American Farm Bureau Federation, in testifying before the Federal Trade Commission examiner in Chicago on this case, stated that the average consumption of steel on the farms of eleven agricultural states was slightly more than a ton a year for farm implements alone. The practice of fixing the price of the steel used on the Pittsburgh base plus the freight rate to Chicago, Moline, Racine, and other centers of farm machinery manufacture, makes each individual farmer pay from $6.50 up on the steel entering into the implements he buys annually.

Farmers sell their products, wheat for example, on the basis of daily fluctuating prices at Chicago, St. Louis, Kansas City, or other market centers. He receives at his local elevator the price at the nearest market minus the freight. Steelmakers sell their rolled steel at a delivered price, which is the sum of the mill price F. O. B. Pittsburgh, plus the freight from Pittsburgh to destination. This may be all right for the mills actually located at Pittsburgh, but 80 per cent of all the rolled steel is produced miles away from Pittsburgh. Steelmakers are taking extra profits in these imaginary and fictitious freight charges. They attempt to justify themselves by maintaining that Pittsburgh is the center of surplus production, but if this theory were sound it would be just as fair to apply the same rule in selling agricultural products.

This is no new grievance, for it has been complained of for years. Farmers now should realize their power and exert a combined influence to do away with this illegitimate profit of the steelmakers. The farmer is the chief sufferer. The case is now pending before the Federal Trade Commission. The "farm bloc" in Congress has demonstrated its strength. Farmers will do well to consider this unfair tax upon their production costs and let their members of Congress know how they feel about it.

American Boys Win in England.

Three boys from the United States in a stock judging contest at the Royal Stock Show of England have just won first place and will bring back with them an international gold cup as evidence of their victory. It might seem like carrying "coals to Newcastle" to compete for such honors right at the cradle of most of our improved breeds of livestock, but these three boys from Maryland were nothing daunted and won over the English team of two boys and a girl by more than 200 points. The honor of competing at this greatest of livestock shows was won through a series of state, county and community contests held under the general direction of the club department of the United States Department of Agriculture in which 15,000 boys and girls took part. The final contest was held at the Southeastern Fair, Atlanta, Ga., last fall.

Many international contests have been enthusiastically followed by readers of sporting pages, as the winning of the polo cup by the United States team from the famous British team, and the recent winning of the sculling championship of the world on the Thames by Walter Hoover. But none of these should cause greater pride in achievement than the winning of this livestock judging team. We should look forward to the developing of a healthy rivalry between the two nations along the line of skill in developing and judging livestock.

Last Call for Holstein Picnic.

Holstein breeders and others interested in this breed of dairy cattle should not forget the annual picnic at Monument Valley Park in Colorado Springs, August 3. It is an important business meeting as well as an opportunity for having a good time and getting better acquainted with fellow breeders.

Education and Farming Ability.

Educated farmers in a Missouri county made an income 71.4 per cent larger than that of uneducated farmers, according to an investigation of the incomes of 584 farmers by the Missouri College of Agriculture. A survey of the incomes of 635 farmers in seven counties in Kansas, made by the Kansas Agricultural College, showed that the trained farmer has a greater income by nearly $1,000 a year than those of farmers with a common school education.

The United States Department of Agriculture reports a survey of three representative areas in Indiana, Illinois and Iowa. It is shown that tenant farmers with a college education received an average labor income of $453 more a year than the man with a high school education, and $979 more a year than the man with only a common school education.

Cornell University reports that men having more than a high school education received $225 more a year than farmers with a high school education, and $529 a year more than farmers with a common school education. They also report that 5 per cent of the farmers with a district school education had labor incomes of more than $1,000, and that 20 per cent of the farmers with a high school education had labor incomes of more than $1,000. Thirty per cent of the farmers with more than high school education had labor incomes of more than $1,000. On the basis of these figures, a high school education is worth as much to the farmer as $6,000 worth of 5 per cent bonds. A college education is worth nearly twice as much.

To the thousands of young men just through high school these figures are worthy of careful consideration and they cover only one line of endeavor, but we have been slow to recognize that education brought its rewards in the business of farming.

It requires four years time and considerable money to go through college, but few who have made the effort have any regrets. College training cannot add to a man's natural ability, but it will enable him to make the best possible use of his powers. In these days as never before the outstanding men, the leaders in the various lines of endeavor, will be college trained men. If you would stand out among your fellows college training will help you to realize your ambitions. The world needs leadership and the great basic industry of agriculture is particularly in need of men of high character and such training as comes from going through an institution especially designed for developing agricultural leadership.

Land Bank Enlarges Field.

The First Joint Stock Land Bank of Cheyenne, Wyoming, announces that it will enter Colorado as a field for making loans on real estate. These banks are a part of the Federal Farm Loan System. The Federal Farm Loan Act provides that private individuals may organize joint stock land banks, with capital stock of at least $250,000 each, and consisting of not less than ten stockholders. One-half of the capital stock must be paid up when the bank starts business, and the other half is subject to call. The joint stock land bank has the right to issue bonds after its capital is paid up, just as the Federal land banks do, and it may make loans at a rate 1 per cent above the rate at which its last issue of its bonds was sold. These banks are not permitted to charge more than 6 per cent interest. They can take care of larger loans than the Federal land banks which are restricted to $10,000. This entering of Colorado by the Cheyenne joint stock land bank will aid in financing the operations of farmers needing more money than can be obtained through the Federal land banks.

Jersey Cattle Club to Kansas City.

Following the holding of the National Convention of the Holstein Association in Kansas City comes the news that the aristocratic Jersey Cattle Club of New York City will hold its 1923 annual meeting in Kansas City next June. Recognition of the West is essential to the healthy development of these national cattle associations. This organization in particular has been criticised for its exclusiveness which has without doubt tended to hold back the more general distribution of the breed. In order to come West for its annual meeting the Jersey Cattle Club found it necessary to increase its membership to more than one thousand, as the New York state law requires that all such clubs with less than one thousand membership hold their annual meetings within the state.

Don't neglect the garden. An extra hour or two of work now will be appreciated when you gather the fresh vegetables this summer.

A few cows, some chickens, and a few hogs will make you a living if you will do your part.

From the Nation's Capital

FARMERS' UNION ACTIVELY OPPOSES ATTEMPT TO ABOLISH DIRECT PRIMARY.

E. E. Reynolds.

THE Senate has completed the agricultural tariff schedules and is now discussing the proposed duties on cotton and other manufactures. In most instances the farmers apparently have gotten what they asked for in tariff increases on agricultural products. In several of the more important items, which would have been most effective in aiding the farmers, and for which they made the hardest fight, they lost out. By a vote of 33 to 24 an amendment to make dutiable imported vegetable oils used in the manufacture of non-edible products was defeated.

This vegetable oil tariff is considered to be the keynote in the farmers' protective tariff demand. All the big dairy organizations, as well as the farm organizations, were strongly back of this movement. But the eastern soap manufacturers' Senate bloc was more powerful than the farm bloc, in this instance. The Senate approved rates of 3 cents a pound on cottonseed oil and soy bean oil, and 4 cents a pound on cocoanut oil and peanut oil, when such oils enter into the manufacture of edible products.

Representatives of the poultry industry made a vigorous campaign for a prohibitive tariff on Chinese frozen and dried eggs. They asked for 24 cents a pound on dried and frozen eggs, but received only 6 cents a pound on frozen eggs and 18 cents on dried eggs.

The rate on hay is $4 a ton; potatoes, 58 cents a hundred pounds; onions, 10 cents a pound; beans, green or dried, 2 cents a pound; peas, green or dried, 1 cent a pound.

Senators Ashurst and Cameron of Arizona attempted to get a duty of 15 cents a pound on long staple cotton, but 7 cents only was allowed. It was argued that the Federal government was called upon to irrigate the arid Arizona lands so that long staple cotton could be grown upon it, and now Congress is asked to grant a tariff subsidy so that the farmers on this irrigated land can grow cotton at a profit.

The farmers are not the only ones who are failing to get all they ask for in tariff protection. A strong current of sentiment is developing in opposition to the rates proposed by the Senate committee. Ten amendments proposing increased rates on various kinds of yarns in the cotton schedules were rejected in one day.

Hearings on the Capper-Tincher grain futures bill designed to make operative the grain futures trading act, have been concluded by the Senate agriculture committee, with much testimony offered on both sides.

A proposition introduced by Senator McNary of Oregon, for a congressional investigation of the possibility of providing government crop insurance was approved by the agricultural committee of the Senate and reported favorably.

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National Grange Plans New Insurance Features.—At a meeting of the executive committee of the National Grange, held at the Washington headquarters, the action of T. C. Atkeson, Washington representative, in putting the National Grange on record in opposition to ship subsidy was strongly commended. Plans were discussed at this meeting for some new grange insurance features, one being a scheme of low-cost group insurance, and another automobile casualty insurance.

Among the events planned for the annual session of the National Grange at Wichita, Kan., next fall, is an exposition of the agricultural products of the Southwest, including a part of the International Wheat and Farm Products exposition which will be held at Wichita in October.

—x—

Farmers' Union Fighting to Maintain Direct Primaries.—The National Farmers' Union has started a movement to combat the agitation aiming to abolish the direct primaries and return to the old convention system, which means the loss to the farmers of the political power which they have acquired after a half century of struggle.

"To abolish the direct primary," says President Charles Barrett of the Farmers' Union, "would be to take a backward step which could not be recovered in the next half century. It would put the special interests in charge of the government. It would threaten with destruction the influence of agriculture in the national Congress and would enfeeble if not destroy the progressive forces of the country.

"Nobody claims that the primary system is faultless. But it is ten thousand times better than the old convention system, where a few men met behind closed doors, selected the candidates and informed the convention that they must take the slate made for them. The farmer under such a system had nothing to say about who would represent him in any office. I would extend the system rather than get rid of it. The farmers do not need a guardian. What they want is an open discussion of all public questions and they insist that they retain the power to select their own candidates. Hand-picked candidates will not do. If the bosses under the convention system make errors and commit political crimes there is little chance that they can be made to pay the penalty except through the exercise by the voters of a direct choice of rulers."

The direct primary is being attacked by powerful political influences, and it is believed that if this system is to be retained or improved, the farmers generally will have to get back of it.

—x—

War Finance Corporation Approves Advances to Co-Operative Associations.—During the first six months of the year, the War Finance Corporation has received a total of $47,034,89 on agricultural and livestock advances. Less than 30 per cent of the amount which the corporation agreed to lend to co-operative marketing associations was actually used because the greater part of the funds needed by the associations was furnished by the banks in the interested districts. Manager Meyer of the corporation reports that statements made by the co-operative associations and the local banks indicate that the loans authorized by the corporation have been vital factors in creating confidence and in obtaining local support.

Recently the War Finance Corporation has tentatively approved advances to co-operative marketing associations totalling $56,500,000, to assist in financing the marketing of tobacco, cotton and wheat during the coming season. It is believed, however, that only a small part of these advances will be used, as the banks and eastern financial interests are showing a decided interest in the financing of co-operative marketing associations.

—x—

Congress May Legislate for National Forestry Policy.—It is encouragingly predicted that Congress will soon enact legislation which will assist in the adoption in this country of a national forestry policy that will tend to put American forests on a permanent basis, along the lines outlined by Secretary of Agriculture Wallace in a recent statement to Senator Norris of the Senate committee of agriculture, as follows:

1. Extension of the existing Federal co-operation with the states in forest fire protection.

2. Extension of the existing Federal co-operation with the states in growing or distributing forests trees or seed for planting.

3. Extension of national forests.

In addition to fire protection that will afford adequate insurance to the growing forests, Congress and the state legislatures will have to deal intelligently with the question of taxation, if forestry is to become popular as an investment, according to the forestry experts.

YOUR THRESHING—AND GOODYEAR BELTS

Goodyear Klingtite Belt in threshing service on the farm of Jalmer Herre, Halstad, Minnesota

At the height of his threshing, Jalmer Herre, of Halstad, Minnesota, took time last season to tell many of his neighbors how much better his new Goodyear Klingtite Belt was performing than any belt he had ever had in twenty years of farming.

"*There isn't a sign of slippage*," he said. "No matter how heavy the straw, the belt delivers the full engine power, and there is no jamming of the feeder. Where I used to have daily troubles with ordinary belts—slippage, jamming, re-setting and overheating—the job is pushed through now at top speed."

Goodyear Klingtite Belts are the pulleys in a slipless grip. They work the same in all weather, do not shrink, are subject to a minimum of stretch, require no belt dressing, need no breaking in, and wear with the lasting strength of their special ply construction.

Goodyear Dealers everywhere, and many progressive hardware merchants besides, sell Goodyear Klingtite Belts, in endless type and in suitable lengths. For further information, write to Goodyear, Akron, Ohio, or Los Angeles, California.

GOODYEAR

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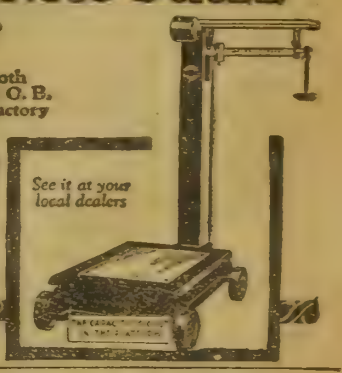

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Oil an Aermotor once a year and it is always oiled. Every moving part is completely and fully oiled. A constant stream of oil flows on every bearing. The shafts run in oil. The double gears run in oil in a tightly enclosed gear case. Friction and wear are practically eliminated.

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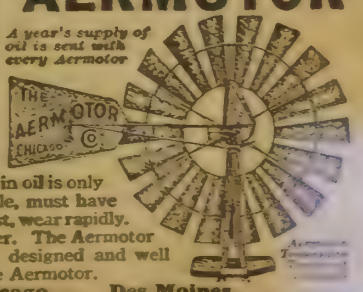

Any windmill which does not have the gears running in oil is only half oiled. A modern windmill, like a modern automobile, must have its gears enclosed and run in oil. Dry gears, exposed to dust, wear rapidly. Dry bearings and dry gears cause friction and loss of power. The Aermotor pumps in the lightest breeze because it is correctly designed and well oiled. To get everlasting windmill satisfaction, buy the Aermotor.

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The Rural Household

Questions about home problems promptly answered by letter and through the magazine. Letters from women containing helpful suggestions for improvement of rural life are always welcome. Address all communications to Mary G. Collopy, Editor Home Department, Western Farm Life, Denver, Colo.

On the Hill.

On a steep hillside, to all airs that blow,
Open, and open to the varying sky,
Our cottage homestead, smiling tranquilly,
Catches morn's earliest and eve's latest glow.

—Paul Hamilton Hayne.

Jelly Making Hints.

There is now on the market a reliable preparation for making jelly "jell." None of us care to depend upon such help for true jelly fruits like currants, or plums, or apples, but we are glad to know that we can have cherry jelly, grapefruit marmalade, and other delicacies, which have never jelled successfully.

Under-ripe apples added to your juice will give you the necessary pectin which makes your jelly the proper consistency. The paraffin which is used to cover your jelly should be just hot, not bubbling, when you pour it on. If the glasses are thoroughly clean you will have no difficulty with the paraffin leaving the sides of the glass.

If you are troubled about jelly tests, amount of sugar, or proper consistency, standards for jelly exhibits at fairs, write to Miss Miriam [illegible]nes, State Home Demonstration L[illegible] sell t[illegible] Fort Collins, or ask your girls' [illegible] leader, or your county agent to send for a free bulletin for you. Attend canning demonstrations in your county; ask the demonstrator for jelly helps.

Sunday Night Suppers.

If the hired men aren't coming home until late and you haven't had any "big company dinner" to provide left-overs for supper, you often find yourself saying, "What can I fix without much trouble? There really isn't a thing in the house tonight."

Did you ever try toasted sandwiches? Cut the bread thin and spread with honey, peanut butter, cheese or jelly Cream or pimento cheese is especially suitable. Toast on both sides of sandwich.

Cinnamon toast sandwiches are a great favorite after the family has given them one trial. Cut slices of bread and spread with butter. Then mix sugar and ground cinnamon about three parts of sugar to one of cinnamon, depending upon your taste for spices. Sprinkle this mixture on the buttered slices, shape the sandwiches and toast both sides.

Plain fried egg sandwiches are nourishing and afford a change. In either case you have saved dish washing for Sunday night.

Your Community Fair.

Begin now to plan for a more progressive fair than you had last year. How does your committee know what you want done? Have you told anyone? Maybe you have thought of a new and more interesting way to exhibit canned vegetables, or meats. Don't criticize until you have offered your services to your committee.

What changes would you like to see made in the premium list? Would you have a better exhibit—a bigger and better fair if every woman in the community met long before the fair and agreed upon uniform appearance in your exhibits? Are you encouraging your boys' and girls' clubs to make creditable exhibits?

My Neighbor's Story.

Mrs. L——, who lives in New Mexico, has just written about her flower garden on their dry ranch. She has sweet peas zinnias, cosmos and even dahlias in addition to one golden glow bush and some hardy woodbine vines. She writes: "Even though I must pump the water for them, it is well worth the effort. And I have found that our plains soil needs cultivation really more than water. My husband says that my early morning work with my flowers has planted roses in my cheeks which had been a bit too pale.

"Wish I could send you a picture of our cozy homestead house with its pleasant surroundings."

Our Fashion Service.

All patterns 12 cents each. Address Western Farm Life, Pattern Department, 1518 Court Place, Denver, Colo.

Read This Before Ordering: Patterns ordered through this magazine are mailed promptly from the factory at Brooklyn, N. Y., and arrive in 10 to 12 days from time order reaches Western Farm Life. Be sure to specify size and number of patterns. Write your name and postoffice address plainly to avoid delay. These patterns are handled at cost, as a service to our women readers. The price of 12 cents includes postage.

3337—A Popular Play Suit. It is cut in four sizes: 2, 4, 6 and 8 years. A 6-year size will require 2⅝ yards of 27-inch material for the dress and 1⅛ yard for the bloomers. Checked gingham, striped seersucker, khaki, jean, Indian head, linen, percale and pongee are desirable for this style.

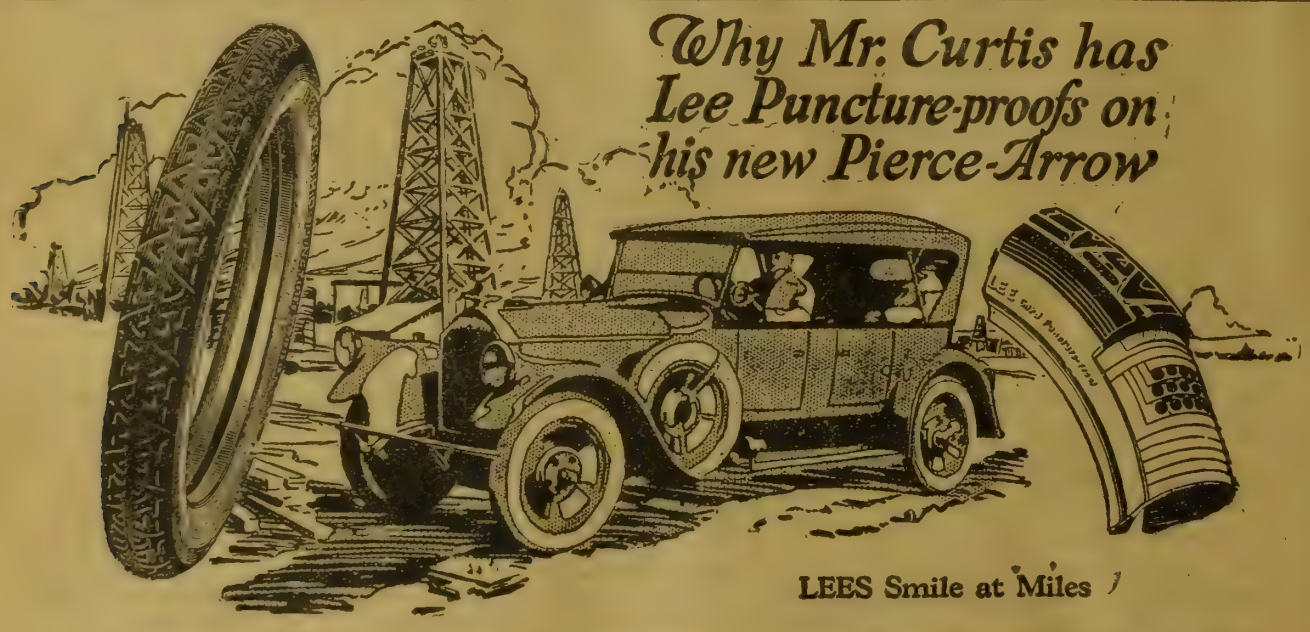
3428—A Charmingly Quaint Dress for the Little Girl.—It is cut in four sizes: 2, 4, 6 and 8 years. A 4-year size will require 2⅝ yards of 27-inch material. Challie, embroidered "all-over," voile or batiste, taffeta or china silk, serge, albatross and gabardine, also linen, and gingham may be used for this style.

3400—An "Easy to Make" Apron.—It is cut in four sizes: Small, medium, large and extra large. A medium size will require 2¾ yards of 27-inch material. Checked gingham with rick rack braid for trimming is nice for this. Seersucker, percale, lawn, sateen, alpaca, drill, or crash could also be used.

3809—For Work or as a "Home Dress."—Here is a very comfortable frock, with graceful lines, in one piece style. The pockets are a useful and attractive feature. The sleeve may be finished in wrist or in elbow length. Figured percale, gingham, drill, linen, serge, mohair, sateen, gabardine and taffeta are good for this model. The pattern is cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. A 38-inch size requires 5 yards of 36-inch material. The width of the skirt at the foot is about 2 yards.

Time Savers.

When your children beg for candy which you haven't time to make, try one of these: Puffed wheat or rice with syrup. Let them eat it out of a bowl. Or, mix three tablespoons sugar with two teaspoons shredded cocoanut and



LEE Puncture Proof Tires

"I cannot pass this opportunity to tell you of the wonderful service and mileage received from Lee Puncture-proof Cords put on my 5500 pound FIAT touring car, over a year ago. I drive this car all over the Kansas Oil Fields, in all kinds of weather and over all kinds of roads and have yet to be delayed by any kind of tire trouble, and the speedometer shows that they have been driven 11,298 miles. So, you can see why I equipped my new Pierce-Arrow with P. P. Cords."

IN this letter, Mr. Ed. T. Curtis, of Curtis & Wells, Kansas City Live Stock Commission Merchants, sums up the feeling of security enjoyed by Lee Puncture-proof tire users, everywhere.

Lee Puncture-proofs are the only pneumatics especially adapted to automotive equipment on the farm. Every farm vehicle, including passenger car and truck, is used for business, and it has long ago been proven that every business car gains efficiency from Puncture-proof tire equipment.

Even the regular Fabric and the Cord tires of Lee manufacture are of exceptional quality—equal to the best the market affords.

The Lee Dealer will demonstrate the safety and saving advantage of this different type of pneumatic—show you why it carries a cash refund guarantee against puncture.

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one teaspoon cocoa. Do not moisten. Give the children spoons and they will do the rest.

Why not try an oil cloth apron for wash day or canning day? Buy them ore make one butcher's style with so little effort.

Livestock Marketing Conference.

Working out a better and more adequate livestock reporting service was the main feature of the conference held in Denver recently by Leon M. Estabrook, Associate Chief of the Bureau of Agricultural Economics of the United States Department of Agriculture, with representatives of the livestock industry of all the western states. This bureau, newly reorganized and consolidated, has as one of its departments the work of crop estimates and market reporting.

Mr. Estabrook in outlining the purpose of the meeting, spoke of the necessity of accurate data on the movement, supply and demand of livestock and of the difficulty of obtaining the information. The necessity was emphasized by the fact that the value of livestock has been reduced from eight billion dollars to five billion dollars, a decrease of nearly 40 per cent, which no other industry could sustain and still survive Due to this tremendous loss and its possible effect on the food supply of the nation, Congress was asked for an appropriation of $250,000 to enable the United States Department of Agriculture to gather and distribute reliable information so the producer could more accurately forecast price trends and plan his operations for a longer period ahead. On account of general economy in government expenditures this appropriation was cut to $70,000.

The purpose of the conference as outlined by Mr. Estabrook was to get discussion on the best means of administering the service to make it of the greatest possible service to the producer. He stressed the importance of the marketing operations and the necessity of the farmer knowing cost of production and cost of marketing. The difficulty of getting accurate information from reliable sources, on which to base, and release facts that would be of most value to the cattleman and feeder is a problem of chief concern.

Series of Reports Planned.

The kind of information most necessary for the various livestock sections, and the best methods of obtaining and using it, formed the basis for the discussions of the conference. Some of the facts brought out were: Failure of the average producer and feeder to give proper attention to marketing problems and the study of market reports and applying them to his local conditions; lack of authentic government reports in daily and weekly papers; indifference and fear of individuals in giving accurate information; need of more accurate information on visible supply of meat animals from all sources and the supply and demand of feeder livestock of all classes in all sections; need of seasonal reports on all factors and conditions affecting livestock.

The marketing section of the bureau has worked out a series of monthly reports covering these various needs and on the accuracy of these reports will depend the amount of service that can be rendered. Mr. Estabrook emphasized the fact that all reports received by the government are held as confidential and are given out in general summaries, and asked that all reports be made as accurate as possible.

The spirit of co-operation that was shown by all present assures the success of the efforts to improve the condition of the livestock industry. Representatives of railroad companies, agricultural colleges, the Bureau of Animal Industry, agricultural and livestock press, livestock and farmers' organizations, individual cattlemen and farmers, all pledged support to Mr. Estabrook and his department in their efforts to serve the livestock industry.

The Colorado State Farm Bureau will try to impress upon its members the necessity of getting accurate information to the United States Department of Agriculture and the need for studying and analyzing the facts contained in these reports in order to make use of them to good advantage. It also will urge the necessity of acquainting Congress with the importance of livestock statistics so that more adequate appropriations may be provided to strengthen and maintain the work, and will endeavor to impress local newspapers with the news value of government livestock and market reports.—F. R. Lamb, Secretary Colorado State Farm Bureau.

Why We Now Have Fast-Time Farming

If necessary, a farmer must sacrifice speed to get thoroughness. In the new system of farming, speed and thoroughness are both to be had.

IT was once thought that it would be impossible to do farm work thoroughly if the tools traveled over the land any faster than a good team of horses could walk. However, the fast-running Fordson, coupled with Standard Fordson Equipment, does all kinds of field work much more thoroughly and at a higher rate of speed, and so this equipment has been responsible for the new term, "Fast-Time Farming."

To make full use of the high speed of the Fordson, it was necessary to use entirely new ideas in making tools. Take the AMSCO tractor drill, for example. The American Seeding Machine Company of Springfield, Ohio, had sixty years of experience to draw upon, but it was necessary to use entirely new principles in building this drill.

First, the frame had to be made so strong and durable that the rapid rate of travel could not overstrain it. Castings had to be made of tougher material. Each part had to be designed with a scientific accuracy that only years of practical experience could give.

The feed mechanism is so positive that there is practically no danger of inaccurate dropping, even when the tractor is operated at high speed or when the seed boxes are nearly empty. Furrow openers are designed to meet all soil conditions.

The man who drives a tractor is inclined to hurry through his work and the AMSCO tractor drill makes it possible for him to make good time because

every adjustment and every part is so carefully made that there is little likelihood of anything going wrong.

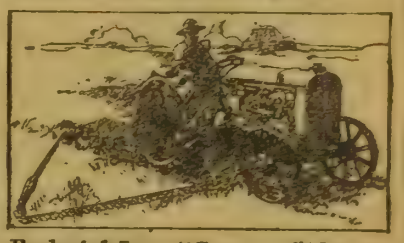
The World Famous Oliver No. 7
On thousands of farms, the world famous Oliver No. 7 has been the plowing partner of the Fordson from the beginning.

The Oliver Two-Way Sulky
Fordson power is available in plowing to the irrigation farmer with the Oliver Two-Way Sulky. Power lift, easy running.

Fordson Disc Plowing
Oliver Fordson special disc plows have set a new standard. They penetrate the toughest soils, yet are light running.

Roderick Lean Automatic Harrow
Fitting the Seed Bed the Fordson way with the Roderick Lean Automatic Tractor Disc—a special Fordson Harrow.

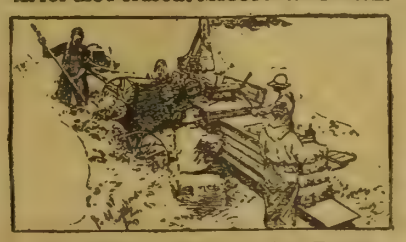
Good Work With Roller Pulverizer
Final Fitting of the seed bed with Fordson power and the roller pulverizer has meant more bushels for many farmers.



Roderick Lean "Cutmore" Mower
Attaches without changes to the Fordson. Power taken direct from driveworm. Makes a one-man outfit with Fordson.

The Amsco Two-Row Cultivator
Cultivating corn is easy for the Fordson farmer with the Amsco Cultivator—special for the Fordson. Made for hard work.

Money-Maker Ensilage Cutter
Fordson silo filling with the Money-Maker done quickly and cheaply. Strength and scientific design give perfect work.



The Money-Maker Hay Press
Baling hay with the Fordson and Money Maker baler is an important operation to the farmer with large hay acreage.

Wood Bros. Individual Thresher
The Wood Individual Humming Bird Thresher and Fordson make short work of threshing. All grain is saved.

Everything considered, the designing of a drill for the fast-running Fordson was a more difficult task than designing a slower-moving tool, but it is safe to say that the results justify the statement that the AMSCO tractor drill fills its requirements perfectly. Its nation-wide popularity is based on its successful performance.

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We handle ALL Standard Radio Equipment and will install AND GUARANTEE radio receiving sets in your home, school, club, or grange. Get music for dancing, stock and market reports, world news, weather reports, etc.

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Stored Grain Will Pay Big Interest—

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Farmers' Service Bureau

Questions regarding any branch of farming, livestock production, animal diseases, legal matters pertaining to the farm, cheerfully and promptly answered by letter and through the magazine. Address Service Bureau, WESTERN FARM LIFE, Denver, Colo.

Cattle Owners Liable for Damages.

Cattle men in this locality, which is on the border of the free range, have placed a gate across the county road between my neighbor and myself to keep the cattle up. They break through a four-wire fence into my fields and do great damage. Can we do anything to make these cattle owners take care of their cattle? Have they a right to put a fence across a county road?—L. G., Delta county, Colo.

You are obligated to keep the cattle out with a lawful fence. If the cattle break through a lawful fence you may get damages. No one has a right to fence off a public county road.—Hamlet J. Barry, Equitable Building, Denver.

Peach Blow Same as Red McClure.

Are Peach Blow patotoes the same as the Red McClure? Are they an early potato? What is meant by summer fallowing?—B. M., Saguache county, Colo.

The potato sometimes known as the Red McClure originated from a selection of the old-fashioned Peach Blow potato, made by a man named McClure. The name commonly used by professional potato growers is Perfect Peach Blow. It is a late variety.

Summer fallowing is a term applied to cultivating soil through the summer period without growing any crop upon it. The purpose is to accumulate a reserve of moisture in order to grow a crop the next year. In summer fallowing the ground is well plowed in the spring, or early summer. It is then cultivated, or harrowed, from time to time through the summer season. There must be enough of summer tillage to keep down all weeds. Soil so treated will accumulate quite a reserve of subsoil moisture and if planted to winter wheat in the fall the crop the following year will be sometimes as much as double the crop produced without summer fallowing.—G. C. W.

Trees on Plains Ranch.

On a ranch thirty miles east of Trinidad, Colo., red cedar trees are now growing and I want to start trees of other kinds. Had thought of Locusts of the two kinds. Would they do well and how about some kind of fruiting mulberries? Is the new American monthly bearing mulberry adapted to our climate The ground was not prepared this spring and I would like to know how to prepare for tree planting. Would it be advisable to grow any crops this season? Or should it be plowed and cultivated this summer without a crop? In the bottom of an arroyo there is a spring and the banks near it are always moist at a foot or two below the surface. Would this be a good place to set any kind of fruit trees? If so, what kind would you suggest.—T. H. M., Las Animas county, Colo.

Locust of both kinds would do well in your climate. Where the red cedar grows, the white cedar or juniper also will do well and being practically a desert tree is a wonder to stand drouth. The foliage being a light green all winter makes a beautiful contrast with the copper color of the red cedar.

In transplanting, evergreens of small size not over two feet in height are the best and the more dirt taken with them the better. They have been successfully transplanted by digging them when the ground was frozen, taking a large cube of dirt along with the roots.

The best mulberry is the Persian. The other varieties are not as hardy and do not stand well under our rigorous winter climate. A new kind, however, is always worth trying. They do best where there is permanent moisture. The best ground to plant trees on is summer fallow on which nothing has been grown for one season and the weeds cultivated out.

Near the spring where you have permanently moist soil, and presumably a water table, apple trees would do well so long as the water laid as low as five or six feet below the surface. A little higher up would be good for plums and on the slopes plant cherries.

An idea quite prevalent is that June is the month in which the plant evergreens, but we find that the best time is early in the spring before growth begins.—E. R. Parsons.

Damage From Irrigation Ditch.

A ditch built thirty years ago runs through my neighbor's ranch. I have been ordered to cut the brush and willows from the sides of the ditch. How wide is my right of way on this ditch? In some places the water backs on my neighbor's land on the upper side of the ditch for twelve or fifteen feet. It is sage brush and waste land. Can he sue me for damages to this land? A wire fence has been built across this ditch in one place and on its banks in another, so I cannot clean it without moving the fence. What must I do to collect damages caused by cattle breaking through my lawful fence? What is a lawful fence?—M. E., Summit county, Colo.

It is the owner's duty to take care of an irrigation ditch and the owners are responsible for any damage that the ditch may do. The question naturally would arise whether damage had been done or not. The government records would show how much right of way your ditch is entitled to.

It is a good custom when cattle, or livestock, breaks into a neighbor's field and does damage for the stock to be corralled and held until the damages are settled. If the amount of the damage cannot be agreed upon between the neighbors, each one should select a party and these two choose a third party and the three decide on the amount of damage. This is a much better way to settle things than to go to law.

A lawful barb wire fence is three wires with posts set not more than thirty-three feet apart and substantial metal or wooden stays every sixteen and one-half feet.—W. S. E.

Bulls on Open Range.

What is the law in regard to bulls on the open range? If one man has a grade Shorthorn bull and another has a grade Hereford, can either make the other keep his bull out of the herd?—C. E. W., Kiowa county, Colo.

Colorado law specifies that "inferior" bulls shall not be permitted to run at large on the open range. It is generally customary where cattle run together on an open range for the different owners to agree what breed of bulls shall be used before the cattle are turned out. Of course, all may not be pleased, but it is a case of majority rule. The privilege of using open or unfenced grazing lands involves giving up some things. A quarrel among neighbors is a thing to be avoided if at all possible. —G. C. W.

Liability in Fencing Up Trail.

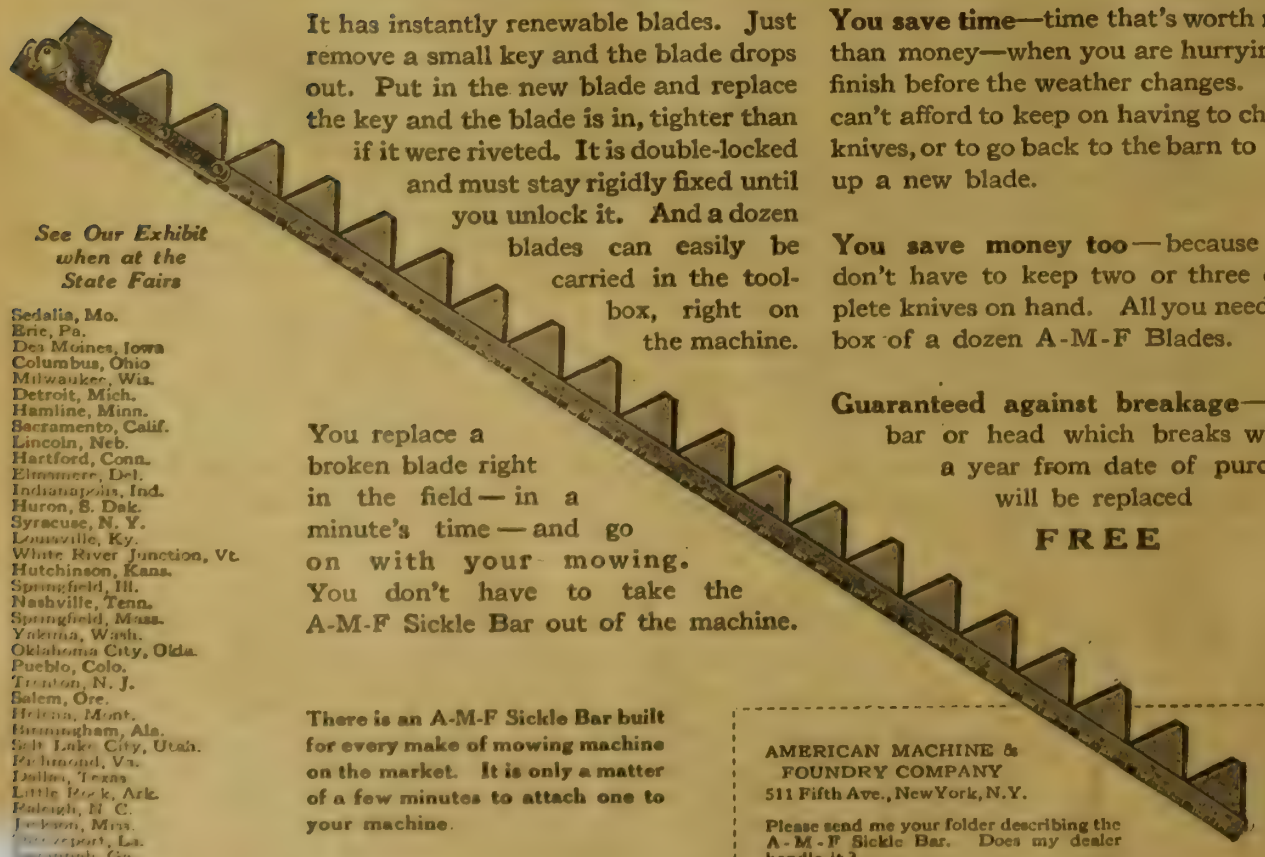
Motor cars running without lights keep running into a fence I have put across a trail crossing my land. They tear down the fence and let stock in on my crops. I have dug a ditch across the trail on my own land deep enough to stop any car. Would I be liable to damages should anyone run into this ditch? —G. B., Kiowa county, Colo.

If this trail has commonly been used by persons driving motor cars and other vehicles I am inclined to think that you would be making yourself liable to damages, unless you took reasonable precautions to indicate to them that the way was closed. Hang large pieces of white cloth on the wires to attract their attention to the fence.—G. C. W.

The Safety Razor of the Fields!

You need never again have trouble, and lose your time and temper with a riveted-up mower knife. You can now have

A-M-F SICKLE BAR



It has instantly renewable blades. Just remove a small key and the blade drops out. Put in the new blade and replace the key and the blade is in, tighter than if it were riveted. It is double-locked and must stay rigidly fixed until you unlock it. And a dozen blades can easily be carried in the tool-box, right on the machine.

You replace a broken blade right in the field—in a minute's time—and go on with your mowing. You don't have to take the A-M-F Sickle Bar out of the machine.

You save time—time that's worth more than money—when you are hurrying to finish before the weather changes. You can't afford to keep on having to change knives, or to go back to the barn to rivet up a new blade.

You save money too—because you don't have to keep two or three complete knives on hand. All you need is a box of a dozen A-M-F Blades.

Guaranteed against breakage—Any bar or head which breaks within a year from date of purchase will be replaced

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There is an A-M-F Sickle Bar built for every make of mowing machine on the market. It is only a matter of a few minutes to attach one to your machine.

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Dairying and Hog Raising

All letters regarding commercial and technical features of dairy farming and hog production promptly answered. Address all communications to Dairy Department, Western Farm Life, Denver, Colorado.

Federal Bureaus Consolidated.

The Bureau of Markets and Crop Estimates and the Office of Farm Management and Farm Economics were consolidated July 1 and are now known as the Bureau of Agricultural Economics. Dr. H. C. Taylor continues as chief; Leon M. Estabrook, associate chief; and Lloyd S. Tenny, assistant chief. A year ago the Bureau of Crop Estimates and the Bureau of Markets were combined into the Bureau of Markets and Crop Estimates. The crop reporting section of this new bureau is now the Division of Crop Estimates, of which Mr. Estabrook will have direct charge.

Wisconsin Leads in Cow-Testing.

The 115 cow-testing associations in Wisconsin equal almost one-fourth of all the associations of the country. Twelve of these associations have been organized since December 1, 1921, and the membership in the state now numbers about 3,300 farmers owning 55,000 cows.

The aims of the associations have been to weed out unprofitable cows and to feed the animals balanced rations for maximum milk production. Records of the associations show the value of high-grade cows and purebred sires. Last year 335 purebred bulls were purchased by the association and eighty-three scrub bulls replaced by purebreds in fifty-nine associations.

No Advantage in Marketing Overly Sour Cream.

Holding cream until it becomes very sour does not result in the producer getting higher butter fat tests, points out the State Dairy Commission of Colorado. Those who tell the cream producer that sour cream will test more than sweet cream are doing a great injury to the dairy industry, as they must be overlooking the effect this practice has on the quality of the butter produced and the price.

Many have been led to believe that by holding their cream until it was real sour, they would be given a higher test. This would be true under one condition, that is, if a can of cream was allowed to stand for a long time at rather a high temperature, there would be enough moisture evaporate to increase the percentage of fat slightly, but this would be very slight, and in that length of time the cream would no longer be fit for human food. Still, this would not bring you more money, as the extra percentage of fat would only make up for the loss in weight from the moisture, which has evaporated.

To illustrate: If there were 80 pounds of sweet cream testing 30 per cent fat, in this amount there would be just 24 pounds butterfat. Allow the cream to stand until five pounds of moisture have evaporated. This would then leave 75 pounds of cream testing 32 per cent. We would still have 24 pounds butterfat, but needless to say, the butter made frm this 75 pounds of so-called cream would not be fit for human consumption.

Thumps Generally Due to Worms.

Thumps in pigs is not a specific disease, but is a form of spasmodic breathing usually induced by some disorder of the lungs, says Dr. R. F. Bourne of the veterinary department of the Colorado Agricultural College. He points out that by far the most common cause of this condition is the presence in the lungs of hundreds of larvae of the common intestinal round worms or ascarids. This condition may appear within ten days after the pigs are farrowed, or may come at considerably later times, depending largely upon the opportunities afforded the pigs for picking up food, water or refuse containing the infective eggs of these worms.

The adult worms exist in the small intestines of more mature hogs where they may cause serious impairment of digestion and general health. Here they give off thousands and thousands of eggs which undergo incubation in filthy pens, wallows and mud holes, and reach the infective stage in three to six weeks. Suckling pigs often acquire their first infection from the dirty teats of the sow and continue to take in more eggs so long as they are kept in contaminated quarters. Upon reaching the intestine of the pig, the baby worms escape from their shells, burrow into the blood vessels of the intestinal wall and are then carried to the heart and on to the lungs, where they burrow through into the air passages, re-enter the esophagus and are carried to the intestine. Here they develop into adult worms. During this migration through the lungs, severe irritation and pneumonia of varying intensity is apt to be set up with a characteristic "thumpy" breathing and a very serious setback in development and growth. The pig's resistance to other disorders is also greatly reduced and many die, either directly or indirectly, from this invasion.

Eggs in the soil cannot be destroyed by any of the disinfectants commonly used. Hot water and strong lye will kill them if they can be reached. Clean dry pens prevent their propagation to a very large degree. Before farrowing, sows should be placed in thoroughly cleaned quarters or on clean ground, after being themselves thoroughly scrubbed with soap and water. When the pigs are old enough, the sow and litter can be taken to clean pasture where they will thrive and grow, free from worms and the troubles which they induce. Adult animals can be freed of worms by appropriate treatment.

It has been found that the intestinal worms of children belong to the same species and only occur in children who have had contact with materials contaminated by hogs. Ascarids are the most damaging parasite known to the hog industry and their association with human health demands our serious consideration.

Cow Stiff in Legs.

We have a ten-year-old cow freshening two months ago that is so stiff in the legs that we often have to help her up. She has a good appetite. At times she puffs up as though she were bloated on alfalfa, but suffers no pain. We are feeding bran, cottonseed meal and alfalfa. Up to last year she had been an extra good milker, but fell off from her previous production.—W. M. W., Utah.

The fact that the cow freshened two months ago and is stiff in her hind leg indicates that possibly there is retention of the placenta or afterbirth. However, in this case there will be a vaginal discharge with a bad odor.

Possibly she is affected with indigestion, which accounts for her bloating. Again, it may be that you are feeding too much cottonseed meal. With such a meager description of symptoms, I can do no more than throw out these few suggestions which will perhaps enable you to investigate the case farther and report your finding.—G. H. G.

Farm Visiting Tour Demonstrates Improved Methods.

(Continued from Page 3.)

went away with the determination to profit by what they had seen. One man said: "Nothing but summer-tilled land for me hereafter. Might just as well raise a real crop on twenty acres as to spread over forty acres and get no more wheat, perhaps fail entirely."

Mr. Klein has raised some wheat on summer tilled land every year since he has been developing this place. He has produced as much as thirty-five bushels to the acre. He has a combine for harvesting. A tractor is used for power. From now on he feels that he has enough land developed and under cultivation to make wheat growing fairly profitable. During the years past it had been tough sledding part of the time for his actual producing acreage had been too small to pay his overhead. At one time after he bought his tractor the firm from whom he made the purchase learned that it was standing idle and on investigation found that he simply didn't have the money to buy oil and gas. Since there was little show for him to pay for the outfit unless it was doing productive work they financed him in providing fuel.

On the Arthur Dudley ranch the principal demonstration was the poor results following the simple disking of wheat land to prepare it for a crop. Mr. Dudley said: "I am showing you this to warn you how not to do it." The field he was showing had got too hard to plow before they could finish it and several lands were finished with the disk. The result was only too apparent. The only good wheat he had was on some summer tilled land.

The forty farmers who made this trip felt well repaid for their time and trouble. The County Seed Growers' Association, largely responsible for the interest taken in the tour, was organized early in the summer, its purpose being to standardize the types of crops best adapted to the conditions and improve and keep pure the seed grown. Also to assist growers of pure, adapted varieties in selling their surplus to good advantage. The officers of the association are Arthur Dudley, president; P. C. Carver, vice president, and John Allen, secretary-treasurer.

Dog Days—

"Dog Days" are at hand when dairying is most difficult without a separator, and when the increase in quantity and improvement in quality of cream and butter are greatest through the use of a good separator.

A De Laval Cream Separator bought now will easily save its cost before the end of the year, and it may be bought for cash or on such liberal terms as to actually pay for itself.

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Sooner or later you will use a
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The Cutter Laboratory
"The Laboratory that Knows How"
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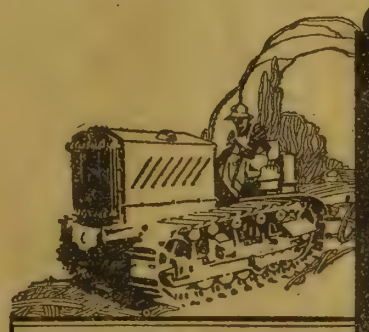
N.B.—Old Style Powder and Pill Vaccines still made for those who prefer them.

Winter dairying makes a profitable addition to wheat farming.



This Chart Corrects the Mistakes Before You Make them

HOLT CATERPILLAR 45

Motor: Polarine Extra Heavy
Transmission: Polarine Transmission Oil
Grease Cups: Polarine Tractor Grease

AT LEAST 80% of all motor repair and replacement costs are the direct result of poor lubrication—either low grade oil or oil of incorrect body.

The Continental Tractor Lubrication Chart will put you right on the subject of tractor lubrication. It tells you just which oil to use with *your* tractor.

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TRACTOR LUBRICATION

SAMPSON MODEL M

Motor: Polarine Heavy
Transmission: Polarine Transmission Oil
Grease Cups: Polarine Tractor Grease

Lice Kill Chickens In Warm Weather

Summer Months Most Dangerous, Says Poultry Authority — To Prevent Losses Add Minerals to The Fowls' Drinking Water.

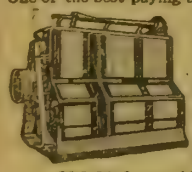
If your chickens are sickly, won't lay and are dying off in hot weather, lice and mites are probably the cause. Dr. B. F. Kaupp, famous poultry authority, says: "Lice are most common in July and August. During these months conditions are more favorable for their propagation." To easily get rid of these pests and prevent losses, add minerals to the fowls' drinking water. This does away with greasing, dusting, spraying and dipping. Soon after the fowls drink the mineralized water all lice and mites leave them.

The necessary minerals can now be obtained in convenient tablets, known as Paratabs. They are scientifically prepared, perfectly safe, and dissolve readily. The tablets also act as a tonic conditioner and are warranted to impart no odor or flavor to eggs or meat. They are equally beneficial to young chicks and grown fowls. The health of the fowls improves, they grow faster, stand hot weather better, and the egg yield frequently is doubled. Mrs. M. N., Pulaski, Ky., says: "I am giving Paratab water to my chickens and am having better luck this year than ever before."

Any reader of this paper may try Paratabs without risk. They cost only a trifle and are sold under an absolute guarantee. Furthermore, the laboratories producing Paratabs are so confident of good results that to introduce them, they offer two big $1 packages for only $1. Send no money, just your name and address to the Paratab Laboratories, Dept. 895, 1100 Coca Cola Building, Kansas City, Mo., and the two $1 packages, enough for 100 gallons of water, will be mailed. On delivery pay the postman only $1 and postage. If not delighted with the results in 10 days, notify the laboratories and your money will be refunded in full. Don't hesitate to accept this test offer, as it is fully guaranteed.

You Can Make Money Milling Flour

One of the best paying and most dignified businesses you can get in, or put your boy in nowadays, is flour milling. On a comparatively small investment, and without any previous milling experience you can own and run the wonderful "Midget" Marvel Mill and make good money from the start.



"Midget" Marvel

Self-Contained Roller Flour Mill

Saves the high freights on wheat out and flour and feed in. "The first eight months I made a net profit of over $8000," says A. H. Ling, Jetmore, Kan.; "My profits from the "Midget" Marvel average right around $40 per day." Chas. M. McKinney, Cooper, Tex.; "Was $6000 in debt when I bought my 25 barrel "Midget," and the little mill pulled me clean out of the hole long before I bought my 40 barrel mill from you," says M. A. Kamm, Oxford, Mich.

Capacities: 15, 25, 50 and 100 barrels of as fine roller patent flour a day as any mill can make. Write for free book, "The Story of a Wonderful Flour Mill," trial offer, terms, etc.

Anglo-American Mill Company, Inc.
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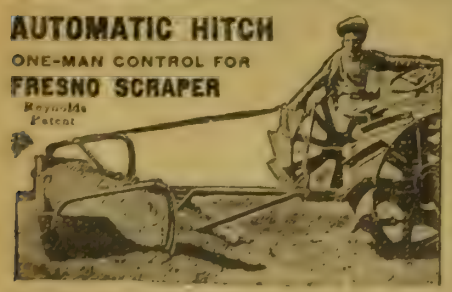
AUTOMATIC HITCH

ONE-MAN CONTROL FOR

FRESNO SCRAPER

Reynolds Patent



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[illegible] MFG. CO. Salina, Kansas

Profitable Farm Poultry

W. E. VAPLON.

Questions about the farm flock promptly answered by letter. Free advice on all phases of poultry production. Address all inquiries to Poultry Department, Western Farm Life, Denver, Colorado.

The hen lays a good egg; it isn't her fault if the ultimate consumer finds it rotten.

If chicks are well fed during the summer there will be no need for drugs to make pullets lay in the fall.

Cold rains often are prevalent in early spring and may cause sickness among the chickens. To avoid dampness on the floors of the henhouse keep them covered with a layer of straw or leaves.

Culling should start with the eggs and never cease as long as chickens inhabit the farm, says Loyal F. Payne of the Kansas Agricultural college. The crippled, wobbly, or weak chick should be destroyed soon after hatching. Scrawny, unpromising individuals should be eaten or sold and only the fittest allowed to survive.

Hens lay the majority of eggs during their first two laying seasons, and especially during their pullet year, if they are early hatched. If a hen lays well during her pullet year she should be kept for another year as a breeder. If she lays well during her second year she should be kept for another year as a breeder. The older she is and the more culling she survives the better, for then she has proved that she has the vitality to stand up under long-continued laying, and consequently is valuable as a breeder.

Early Molters Are Quitters.

When a hen molts she has usually finished her egg-laying season. One that molts in July or August has a short egg-laying season. A hen that delays molting until September or October or November has a longer laying season. Some late molters do not go through a complete molt, but just develop a few new feathers and begin laying again in from six to eight weeks. Early molters usually molt slowly and prolong the development of a new coat throughout the entire summer and fall. They do not give much thought to egg production until the following spring. Occasionally an early molter will lay a few eggs in the winter, but she is not the desirable type of persistent producer.—Paul C. Jamieson, C. A. C.

Egg Marketing Problems.

In an article appearing in the poultry department of Western Farm Life a poultry specialist from our agricultural college at Ft. Collins criticized the farmer who fails to pay any attention to the quality of his eggs, stating that it cost no more to produce infertile, guaranteed fresh eggs except extra pains. What advantage is it to the farmer to do this. I produce infertile, guaranteed eggs, never allowed in the sun, and warranted strictly fresh, but the grocer cannot pay me any more as they all go in with the rest in the same crate as just eggs. We do not know any one in Denver who is willing to pay a premium for such eggs delivered parcels post, though no doubt there are such persons. No use to scold the farmer. Furnish the market and the farmer will send the eggs, each one stamped with the date it was laid if desired. Farmers who have produced the eggs cannot afford to go to Denver to find a market.—D. C. T., Delta county, Colo.

Editor's Note—Do other of our poultry producers have any ideas along this line? What can be done to ensure to the one who has produced high quality products suitable reward for his extra effort. Are any of our egg producers getting a premium for their eggs? Write and give your experiences.

Buff Leghorns Good Layers.

Are Buff Leghorns a good egg-laying variety? We wish to stock up with a laying variety and are partial to the "buffs."—M. A., Morgan county, Colo.

The Buff Leghorns are a little larger than the White Leghorns and lay a little larger egg. If you prefer a buff color you cannot go wrong in selecting this egg-laying variety. They are not very common and it may be a little difficult to get stock, but this can be overcome. The White Leghorns have a reputation for high egg production, but you can breed up a strain of buffs that will do just as well.—W. E. V.

Rye for Poultry.

Is rye a safe feed for chickens? How would you feed it? We have never had any experience in feeding rye. How is hog millet for young chickens?—J. C. H., New Mexico.

Rye has a good value as a poultry feed, but the hens do not like it so well as they do other grains. I would prefer wheat, but if you have rye on hand you can feed it. It is a good plan to soak it in water for a few hours before feeding.—W. E. V.

Hens Probably Have Apoplexy.

We are losing some of our best laying hens. They seem in good health, but drop off the roost at night. They die so suddenly that we have never seen one really ailing. Some of the hens we have killed seem excessively fat, and yet we feed light—twenty pounds a day to a hundred hens. I get fresh bones from the market and chop for them three times a week. The grain ration is largely wheat with an occasional feed of chop, barley, and oats.—H. I. E., Garfield county, Colo.

The trouble with your hens is probably fatty degeneration caused by overfeeding. Hens that are not laying heavily are especially apt to be affected. Make the hens work harder by scattering their grain in deep litter, or by making them range more. The feed is all right for laying hens.—W. E. V.

Marketing Poultry Co-Operatively.

In a recent talk urging co-operative marketing for poultry producers, E. B. Heaton, Director of Dairy Marketing of the American Farm Bureau Federation, says:

"One valuable line of work which many farm bureaus are undertaking is that of promoting egg and poultry marketing associations. This is one phase of our marketing problem that has not been given the attention its importance would warrant. Poultry and poultry products represent about one-tenth of the total productive income of the American farmer. The past two seasons the difficult situation under which the farmers have had to contend from a financial standpoint, has pointed out the value of the cash income derived from this most neglected part of the farm business.

"The commonplace market for the majority of producers has been the local grocery store. These grocery stores in the majority of cases do not have the facilities for handling eggs or poultry in the most efficient manner. Eggs are kept in the back room or basement of the store without proper cooling in the summer time. But little attention is given to grading or sorting the eggs. Live fowls are shipped in promiscuous lots with no attention given to sorting according to grade or size. There have been exceptions to this, of course, where privately owned poultry and egg plants have been established, but in the majority of instances where these are located, they are operated on a one-price basis. The eggs and poultry are bought as if they were all medium or poorer in grade and the dealer has reaped the advantage of sorting and grading. All this has promoted carelessness on the part of farmers in marketing their eggs and poultry. Co-operative marketing is the only way that this situation can be changed and at the same time develop increased profits for the producer.

"It is a feasible proposition for each of the 1,400 or more co-operative creameries in the United States to establish poultry and egg departments. This may either be developed as a separate poultry association handling the business through the creamery, or the creamery may undertake this proposition under the same management. The most profitable way to do this would be to have the poultry and egg association pool these products the same as the producers are pooling their butterfat through the creamery. The creamery could furnish additional cold storage space and employ an egg and poultry man who could carry on the details of this business separate from that of the creamery, even though under the same general management.

"In communities where there are no co-operative creameries, or other co-operative dairy plants, other possibilities are offered with the co-operative elevator or the co-operative livestock shipping association, or by having poultry and egg associations. The possibilities for the future development along these lines are big."

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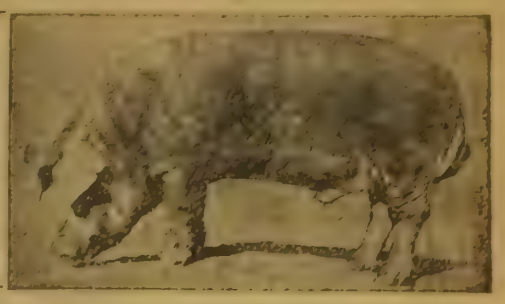

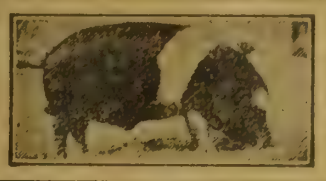

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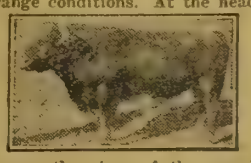
Are the big hardy kind that make good under the most trying range conditions. At the head of the herd is

Big Sandy



From this herd came the sires of the grand champion carlot steers at the 1920, 1921 National Western. TWENTY BULLS, 2, 3 AND 4 YEARS OLD, THAT WE WILL SACRIFICE IF TAKEN AT ONCE.

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breeding has proved itself in the show ring. Lord Douglas calves out of Snow King heifers are even better. We will have some bulls of this breeding for sale this summer.

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Cows from Polled Plato, herd headed by POLLED SUCCESS A 3rd. Young bulls and heifers for sale.

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ARE MONEY MAKERS.

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We know the war is over and have bulls for sale at prices that you farmers and ranchmen can afford to buy. Write for our bargain list and easy payment plan.

We also have several young bulls for sale, priced to sell.

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are the foundation blood of true Milking Shorthorns. We have them. A few bulls for sale.

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from the oldest established herd in the state. We can supply your needs in bulls of beef type either horned or polled Shorthorns.

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We have bred hundreds of prize-winning and high-producing Holstein cows, including

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We can supply you with that same line of breeding. Write

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TYPE

We offer you a wonderful amount of these Holstein qualities—and from a clean herd. Bull calves from fine record dams. Pahgre Valley Ranch, Loesch Bros., Montrose, Colo.

SIZE

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Twenty cows in this herd on an official seven-day test averaged 446.13 lbs. of milk and 20.19 lbs. of butter.

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In a word, it was designed and built expressly to meet conditions of rural hauling.

There were several trucks of the old types that would perform on paved city streets.

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We felt that Reo was ideally equipped with experience and reputation to undertake this job that others shied clear of.

We knew that certain factors were necessary to success.

First, a rugged, dependable motor with a pull like a mule and built to stand grief.

That Reo Four motor is unquestionably the greatest motor ever built—bar none.

After more than ten years in service there is none to dispute that.

Chassis must be just as rugged—capable of standing up under excessive overloads and on all kinds of roads.

Transmission, clutch, gears, axles, steering gear—all must have stamina to meet any condition.

Speed too was essential if the truck were to pay for itself in saving of time, of men, and horses.

This Speed Wagon does all that, and in addition, pays a handsome profit by getting your produce or stock to market in perfect condition, and early enough to guarantee you top prices.

For all loads ranging from a quarter-ton to a ton-and-a-quarter.

A lighter truck will not do your work—nor will it prove as economical as this Reo Speed Wagon.

PRICES

Other body types are obtainable mounted upon the standard Speed Wagon chassis at the following prices:

Cab Express (Illustrated)	*$1375*
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Chassis only $1185

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Six-Cyl. Light 7-Pass. Touring Car	*$1595*
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All prices F. O. B. Lansing, Plus Federal Tax

Write for Catalog

Over 75,000 Now In Use

Reo Motor Car Company, Lansing, Michigan

Business Hinges on the Outcome of Labor Troubles—Page 5

WESTERN Farm Life

Vol. XXIV. *Denver, Colo., August 15, 1922.* *Semi-Monthly*

In This Issue

Colorado Holstein Breeders Hold Annual Picnic

Farming With Water Versus Farming Without Dairying and Hog Raising

How to Manage Cattle Ranges in Dry Seasons

Market Outlook for Farm and Ranch Products

Farmers' Service Bureau

National Selling Organization Needed

Profitable Farm Poultry

Voight Bill Oponents Argue That Whole Milk Not Essential in Human Diet

The Rural Household

Look for the RED LINE 'ROUND THE TOP

Millions of farmers wear the Boots and Shoes with the RED LINE 'ROUND THE TOP in preference to any other. This tremendous demand is based solidly on superior Service—longer Wear that saves you many a dollar.

THE B. F. GOODRICH RUBBER COMPANY
Akron, Ohio

GOODRICH
HI-PRESS
RUBBER FOOTWEAR

Community House Dedicated.

A 30 by 60 one-story community house of adobe construction was recently dedicated in the Cherryvale community, New Mexico. The ground floor is provided with a stage and a stage entrance, and the basement will be fitted up for clubs and club work, and a kitchen and dining room for community entertainments.

The building is thirty miles east of Las Vegas, and will serve as a community center for a wide territory. The building of this fine structure out in the open country was made possible by the co-operation of the people of Cherryvale community and Las Vegas-San Miguel County Chamber of Commerce. The Chamber of Commerce donated $1,000 in cash and furnished a great deal of the inspiration and encouragement to the local people. The Cherryvale people donated both money and material. Practically all of the labor of building and that required for excavating the basement, as well as the hauling of materials from town was donated by the farmers of the community. The ladies of the community decorated the interior, did all of the painting and will continue to raise funds for furniture and equipment. The community house is located in the center of the district and is easily accessible, and will undoubtedly make it possible for a large number of people to cooperate in community and country life improvements.

County Agent Lorin F. Jones and Mrs. Jones have been leaders in the work. They are planning to make this a center in which farm bureau meetings may be held, where home demonstrators may do their work, and boys' and girls' clubs may hold their meetings.

The women of the community are planning to install a canner and some other modern equipment, so that their harder work may be done at the community house on a co-operative plan, thereby lightening their work and adding a social feature to what had heretofore been drudgery.

The formal dedication of the building was made the occasion for a community picnic with a big barbecue supper. It is estimated that more than a thousand people were served, and there was beef to spare. R. E. Boettcher, a leader in the building of the house, gave the address of welcome on behalf of the Cherryvale community. V. K. Jones, president of the Las Vegas-San Miguel County Chamber of Commerce, made the response. Mrs. Boettcher gave a brief history of the community building. Addresses were made by Rev. H. R. Mills of Las Vegas; President J. H. Wagner of the State Normal University; Dr. J. W. Searson of Lincoln, Neb., and President H. L. Kent of the Agriculture College. County Agent Jones presided. Mrs. Chas. O'Malley with a number of Las Vegas young men and young women provided excellent music throughout the program.

President Kent emphasized the importance of using the community building to develop community life and spirit. "Do not stop your work now that you have this building completed," said President Kent. "Use it constantly. Remember that a community in which parents and children go to the same place at the same time for their recreation and social life is a community in which the social life is clean and wholesome. No parents in such a community need ever apologize for the habits or morals of the children of the community and neither will the children need to apologize for the chance their parents gave them.

"Use this building for your club meetings, for your home demonstration and farm bureau meetings. Make it an instrument for the solution of your economic problems.

"New Mexico expects such communities to develop the best kind of citizenship. Meet here frequently to discuss the public policy and problems of your county and state government. Through such discussion you will develop an intelligent and progressize citizenship."

The whole enterprise is an object lesson in what may be accomplished by community effort and co-operation. The people of Las Vegas have shown an interest second only to that of the people of the Cherryvale community in the building and bringing to completion of this community project.

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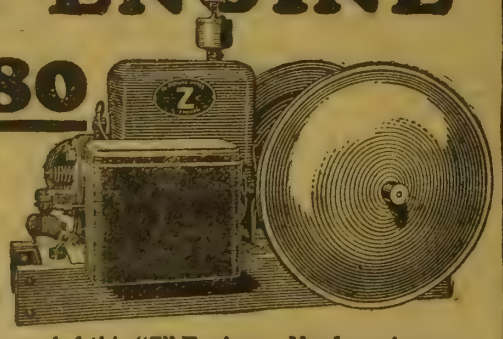

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Western Farm Life

A Western Magazine for Western Farmers and Stockmen

VOL. XXIV. DENVER, COLORADO, AUGUST 15, 1922. No. 16.

Colorado Holstein Breeders Hold Annual Picnic

URGE PROGRESSIVE ACTION IN PROMOTING INTERESTS OF BREED

IF Holstein milk had been as thoroughly and as persistently advertised as some of the brands of cigarettes or tobacco the dairyman could not supply the demand," said a speaker at the annual picnic of Colorado Holstein breeders held at Monument Valley Park, Colorado Springs, August 3. It was pointed out that dairymen have worked and toiled to improve the producing capacity of their herds, have introduced equipment for the handlin the product more efficiently, have developed cows capable of giving twenty times their own weight in milk in a year, but have given far too little thought to enlarging the market for the product, which has the merit of being the most vital, life-giving food available for human beings from childhood to old age. Wherever systematic efforts have been made to fix the mind of the public upon the value of milk as a food increased consumption has followed. The importance of giving this phase of the dairy business united backing was urged upon those in attendance and particularly giving wide publicity to the value of Holstein milk.

Some fifty breeders and their families were in attendance at this picnic, which is an annual event. The picnic itself was a most enjoyable affair and afforded an opportunity for breeders from different sections to get better acquainted and incidentally talk "shop" and work up their enthusiasm for their chosen breed of dairy cattle. The contents of the well-filled baskets were spread under the trees of the park and the whole party sat down together. The Holstein Club had provided several freezers of ice cream and this with the coffee was served to all who were there.

To Make Colorado Holstein Center.

Holstein breeders of Colorado have a wonderful opportunity to make this State as important to the dairy business of the West and Southwest as is Wisconsin to the North Central states and New York to the Eastern states. It has been demonstrated that cattle grown and developed under Colorado conditions are larger and more vigorous than the animals from which they sprung. This was commented upon by the delegates who went to the National Holstein Convention at Kansas City in June. From the standpoint of production records Colorado breeders have done remarkably well. With a little more aggressiveness in an organization way by the breeders of the Black and Whites the breed will easily forge to the front and the state become a recognized center of Holsteins of outstanding merit as dairy cattle. The industry is new as yet and this cannot come all at once, but as time goes on there will be less and less necessity for going to eastern states for dairy stock.

As an organization the state Holstein association is but an infant, although it is a most lusty one and soon will be out of its swaddling clothes. It has maintained a paid secretary for the past year who has done all he could to sell the organization to the Holstein breeders of the state. Fred C. Waddell, of Pueblo, who has held the office for the year, made it clear in his report that he must have the active backing of Holstein breeders all over the state in order to make the organization a success.

By George C. Wheeler.

Financial support is absolutely necessary to putting a live, effective organization on the map. Indnvidual breeders sometimes fail to appreciate what it means to have an organization working for their interests all the time. The results are not always near enough to be recognized. Mr. Waddell pointed out the many ways in which the organization, properly financed, could further the interests of breeders. He intimated that the cream check for one week, if contributed by every Holstein breeder in the state, would bring sufficient support to make it possible to branch out and do many things now impossible.

Give Bull Calves to Beginners.

An interesting feature of Mr. Waddell's report was relative to the giving away of five registered bull calves to any dairyman present not now using a purebred sire. Calves were contributed by the Modern Woodmen Sanitorum, of Colorado Springs; by George Siddons Colorado Springs; Model Dairy Farm, Holly; Mrs. R. D. Douglas, Rush, and the Turkey Creek Farm of Spencer Penrose. Only two applicants appeared, Jesse A, Davidson of Lamar, and Mrs. Chas. W. Fisher of St. Charles. It was voted to authorize the committee in charge to dispose of the remaining three calves where they would do the most good. The choice was by lot and the persons receiving the bulls agreed that they would grow them out and when they became of serviceable age send the scrub bull to market and use the purebred.

Must Solve Marketing Problems, Says Morton.

Professor George E. Morton of Colorado Agricultural College, who is also State Dairy Commissioner, in his address covered the legislation in prospect having to do with the dairy industry. He urged support of the Voight "filled milk" bill now before Congress, which has already passed the House of Representatives and upon which hearings were begun in the Senate early in August. He also pointed out the necessity of legislation bearing on uniformity of prices for dairy products and urged that careful consideration be given to the problem of marketing whole milk. Solving this through co-operative effort has not been successfully worked out in this section. Professor Morton also called attention to the menace of tuberculosis in our Colorado dairy herds and told breeders it was up to them to take vigorous action to keep the herds of the state clean. In conclusion, he announced that a department of the college had taken up the matter of studying marketing problems and would endeavor to work out some of the difficulties involved in getting farm products into the hands of consumers at a minimum of cost.

In his report of the National Convention in Kansas City, which he attended as a delegate, Arthur Ponsford of Denver commented upon the smoothness with which all the business was transacted despite the rumors of dissension within the organization. He told of the attempt to visualize the perfect cow, but commented on the fact that the perfect individuals as to type could not show big production records and remarked that evidently the perfect cow, both as to conformation and production, had not been attained.

Absolute Integrity Needed in Breeding Business.

The real "pep" speech of the program was made by E. E. Murphy of Leavenworth, Kan., chairman of the governing board of the Woodmen Sanitorium. Mr. Murphy disavowed any expert knowledge of dairy cows, but related his experiences in getting cows for the Sanitorium herd and said that he soon learned that it was poor policy to keep grades when it was so easy to get started in high-producing, registered cows.

In gathering the animals of the Sanitorium herd Mr. Murphy came to realize how important absolute integrity and square dealing were in a breeder of purebred livestock. The disastrous results following crooked dealing on the part of an occasional individual, as related by Mr. Murphy, impressed his audience with the high standards essential in the business of breeding purebred livestock, and it might be said in passing that in few other lines of business will higher standard of integrity be found than in that of handling registered livestock. In his plea for better breeding and higher standards of production, Mr. Murphy stated that while 23,000,000 dairy cows are now being milked in the United States, the size of the nation's herd could be cut in half if well fed and properly handled purebreds were kept. While we boast of our high producing cows and claim world champions, the average production of our dairy cows is far below that of the cows of Denmark or Holland. "If purebred sires were universally used," said Mr. Murphy, "our average butter production could be raised from 17 pounds a week to 40 pounds. This is something that can be brought right down to the individual herd. In any cow testing association the results of a few months' work opens the eyes of many of the members to the fact that they could in some instances cut the herds down half and realize greater profit; in other words, a few profitable producers are carrying the deadbeats."

Appropriation for Tuberculosis Eradication Urged.

A plea for more aggressive work in combatting the serious menace of tuberculosis in our dairy herds was made by C. F. Lauderback, manager of the Woodmen Sanitorium. Mr. Lauderback pointed out the extent to which tuberculosis in human beings came from tubercular cows, particularly among children. He called attention to the fact that the state of Wyoming was closing the bars to cattle from Colorado because of the prevalence of this dread disease in some of the herds of the state. A state cannot move forward in the dairy cattle business unless it adopt vigorous measures to clean up its herds and keep them clean. An appropriation of $100,000 is needed to carry on the work of cleaning up the state according to Mr. Lauderback, and he urged members of the association to use their best efforts to have a proper appropriation made available. At the present time there is but one Federal accredited herd in the state of Colorado, and that herd got on the list in another state before being moved to Colorado. Lack of funds is limiting the (Turn to Page 14)

Breeders in one of the older dairy states inspecting a Holstein herd. Enthusiasm is one of the first essentials in advertising to the world the good qualities of one's chosen breed of dairy cattle.

Farming With Water Versus Farming Without

DEEP PLOWING AND MOISTURE CONSERVATION COMMON TO BOTH TYPES

E. R. Parsons.

EARLY in the season we were asked which was the most profitable farming, with water or farming above the ditch. We did not answer the question at the time because there is no definite answer. So much depends on the man and the opportunity. If the farmer should be able to obtain a ranch on good soil well situated and easy to irrigate with plenty of water running in his own ditch he would certainly have the opportunity and if he possessed the brains to take full advantage of it he would probably make it pay as well if not better than any other kind of farming. On the other hand, if a man has buy his water from a company, sometimes getting it and sometimes not and seldom able to turn it on when his crops most need it, he would begin to think that trusting to nature and his own intelligence in the art of conserving moisture would in the end be much more profitable for him than trying to raise crops on water which is doled out to him at the wrong time. Of course, all companies are not this way. There are some that have plenty of water even in dry years and under their ditches are many prosperous farmers who can pay for their water and other expenses and have a living wage left over.

Must Pay Interest on Investment.

The best test as to whether an undertaking is profitable or not is the interest it pays on the investment of a man's capital and labor. Land with its own water is worth from five to ten times as much as ordinary praire land above the ditch. Therefore the farmer on such land in order to make as much as the man on the non-irrigated land must raise from five to ten times as much crop. Farming without water therefore is more popular with men of small capital who would rather have a less pretentious place and no mortgage to worry about. The difference between the two kinds of farming is not as great as it might seem. In all semi-arid countries the conservation of moisture should be considered a prime factor in agriculture, for whether we irrigate or not, the more water that is saved the more there is to go around. There are some farms so situated that while irrigating water is always more or less scarce in summer when most needed, there is always plenty in the early spring. In such a case it is quite possible to soak up the land, conserve the moisture in it by proper conservation methods, and raise as good a crop on it as if it were irrigated at regular intervals.

Deep plowing is the foundation of successful farming and it makes little difference what kind of farming it is, so long as the soile is good and deep, for shale, clods and gopher clay do not improve the surface of the seed bed. The irrigators found out long ago that with all the water in the ditch they could not raise a ten-inch beet in five-inch plowing. They also discovered that after raising a crop of beets on deeply plowed land the following crop of wheat or potatoes was always a big one. One of our irrigating friends tells us that one good wetting down of the land after deep plowing lasts three times as long as one on shallow plowing.

Conserve Water in Subsoil.

There is a vast difference between the roots of trees and crops on irrigated and unirrigated land. When water penetrates the soil only about six inches or a foot and it is applied every two or three weeks, the roots will be found all bunched up in the same space, and should the supply fail for some reason or other the roots, being practically all in the surface, will soon dry out and the crop be in much worse condition than if it had never been irrigated. It is much better to have the water previously conserved in the soil and subsoil so that as the top dries out the roots will follow the moisture down into the subsoil and a final irrigation as the grain is maturing will finish the crop. This also applies to gardening and orchard work. By deep plowing in the fall a splendid garden can be started in the early spring and no water should be used except as a last resort, and then the irrigation should be a good one and when followed with thorough cultivation will last a long while. Those, however, who have no water will find that with deep plowing and fertilization with leaf mold, black corral dirt or even chicken house refuse applied in the fall they can raise a very satisfactory garden indeed, without any ditch water.

Delay Irrigating Young Orchards.

Experience with trees on dry land has taught us many things. We find that space means moisture, that trees allowed plenty of room will produce fruit abundantly without any irrigation, and that trees planted at the old distance apart must have water in order to bear marketable fruit. It is also found in non-irrigated orchards that the root structure is remarkable for its depth and reach, the roots of apple trees for instance often attaining a distance of twenty feet from the trunk at six or seven years, thus meeting between the rows when the trees are planted forty feet apart. In the irrigated orchard the roots are usually more or less bunched up in the watered area, and if not irrigated regularly will suffer for moisture. Those who plant orchards intending to irrigate them may gather from this that there is no necessity whatever to use any water on the trees for five or six years, and that the longer the first irrigation is delayed the stronger and finer their root structure will be. The principal advantages of fruit trees being under the ditch are that more can be planted to the acre and in very dry weather the fruit will be larger.

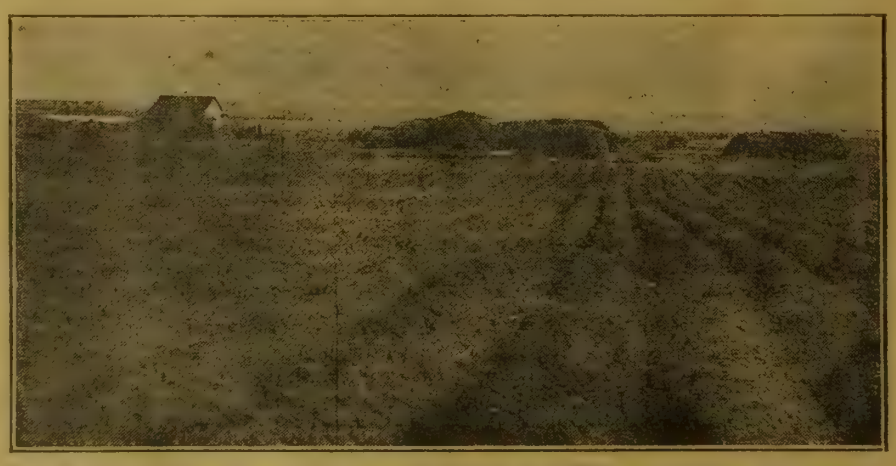
Everybody has his own idea about irrigating an orchard, but no one will deny that one good application of water is much better than several small ones, and that if the moisture is conserved in the soil by proper cultivation as soon as the surface is dry enough, not only will the trees be much better off, but much water will be saved.

Flooding Land Cements Surface.

Farmers complain that the texture of the soil is much injured by irrigation. All flooding of the land packs it solid and when the time comes to plow it is often in a very cloddy condition and difficult to mellow into shape. The best time to work the field which has been irrigated several times for grain during the season is after rain and in the fall if possible, so that the frost may help to disintegrate the lumps during the winter.

There is a vast difference between irrigation water and rain. The ditch water taken from a stream or river is usually pretty hard water at the start and then on the trip down grade picks up all kinds of mineral and organic matter until arriving at its journey's end it is well loaded with fine particles besides what it carries in solution. The consequence is that when spread out on the land the top soil acts as a filter, catching all the solid matter in the spaces between the granules and becomes cemented together in a more or less solid mass as soon as it dries out. Rain water on the other hand is distilled water, and all the impurities it can catch on the way down are a very small percentage of fine dust and a trace of one or two gases. It does not have the cementing effect of irrigating water.

In order to keep his soil in the best physical condition the farmer should use as little irrigation water as possible and supplement this treatment with conservation of moisture methods used by those who have no water. This is much better policy than that of a friend of ours who used to make his apples drop by untimely waterings and when remonstrated with would say: "You see I pay for all this water and the only way I can get even is to use it."



Necessary to adapt methods to conditions. Listing on plains farm to prevent soil blowing.

How to Manage Cattle Ranges in Dry Seasons

MUST NOT CARRY TOO MUCH STOCK DURING DROUGTH PERIODS

SEASONS of abundant range forage and stock water followed by seasons of restricted forage and scarcity of water are characteristic of the cattle country in the Southwest and have much to do with prosperity or the lack of it among cattlemen. It was with the idea of reducing the destructive effects of these periodic droughts that James T. Jardine and Clarence L. Forsling of the Forest Service made a study of range conditions and practices in this region, the results of which have been published in Department Bulletin 1031, "Range and Cattle Management During Drought," just issued by the United States Department of Agriculture. At the present time the danger of loss during drought resulting from the attempt to carry the number of cattle that fully stock the ranges in periods of plenty of feed is greater than in the past, for the reason that in the old days it was possible to develop new range in any emergency. Now there is no new land that can be developed for range purposes, and other ways must be used for preventing great losses during drought.

Rainfall records and the experience of stockmen indicate that droughts of three to four years' duration may occur in each cycle of eight to ten years. In southern New Mexico it has been shown that drought alone if prolonged beyond the second year killed 40 per cent of the best grazing plants and reduced the quantity of forage approximately 50 per cent. Grazing, depending upon the time and amount of use, tends to increase the effect of drought, but when limited during the main growing season—July, August and September—to from 30 to 50 per cent of the proper yearly rate, it has no harmful effect. The reduction at this time, says the bulletin, does not interfere with full use of the range, since the grass cures and is valuable for winter range. To restore damaged grama-grass range, which is the kind found in this section, will probably require several years of judicious handling.

Carrying Capacity Summarized.

Better results in handling range may be obtained by dividing it up into parts best suited to winter grazing—grama-grass range—and parts better suited to spring and summer grazing—tobosa-grass range. If a range is all grama-grass, grazing may be deferred on a portion of it until after the growing season for use later in the year. These parts may be rotated so that each receives the benefits of deferred grazing in turn.

Figures obtained thus far show that range with a grazing capacity of 27 acres per cow per year will only carry stock at the rate of 32 acres per head the first year of drought, 45 acres the second, 54 acres the third, and 54 the fourth. Cattle raising, to be successful, must be adjusted so that the number of animals will conform to the carrying capacity of the range in time of drought. There should be a reduction of 15 per cent the first year, 40 per cent the second year, and 50 per cent the third year.

Since the Southwest is primarily a breeding section, and it is difficult to dispose of breeding cows upon short notice, the breeding herd should be confined to what the range will carry in poor years, or to 50 per cent of the carrying capacity during good years. The surplus forage in good years may be utilized profitably by holding over or buying youg steers or heifers.

Proper distribution of stock for full and even utilization of the range may be secured by adequate watering facilities, salting of stock and riding. It is desirable to have permanent watering places within five miles of each other where the carrying capacity will justify.

How to Improve Herd.

The cattle on the range may be improved by the use of good purebred bulls, culling the poorer cows and replacing with the best heifers. Twenty-two to thirty-three more calves per 100 cows than the present average for southwestern range conditions have been obtained over a period of four years where better care and attention were given the breeding herd. A sufficient amount of winter range, supplemented with three-fourths to one and a half pounds of cottonseed cake per day from February until spring or when summer rains come, will keep cows in shape to mother their calves well and to breed again the following summer.

The heavy losses from starvation in time of drought may be avoided by adjusting the number of stock to what the range will carry. The heavy loss during the usual critical period of the year may be prevented by reserving a supply of winter range for use during that period, avoiding long distances between feed and water, and feeding a small percentage of the poorest cows. A little concentrated feed, such as cottonseed cake or meal, will usually save the weak cows that might otherwise perish. Chopped soapweed may be fed to advantage when forage is getting short. Losses from blackleg may be made almost negligible by vaccination. Dipping will keep stock free of scabies and lice.

The low price received for steers from the Southwest is due largely to stunting as a result of poor feed on the range from early winter until the rains come the following summer. Feeding a little cottonseed cake or similar feed will aid in keeping the young stock growing and cause them to respond quickly to grass when it comes.

Cattlemen of the Southwest may obtain the bulletin free by addressing the Department of Agriculture at Washington.

Market Outlook for Farm and Ranch Products

TREND OF BUSINESS HINGES ON OUTCOME OF LABOR DIFFICULTIES

Edited by Glenn G. Hays.

THE rail and coal strikes thus far have put 1,000,000 more men out of work, caused a coal shortage which is curtailing operations of some of the big coal-using industries and an advance in price to all consumers, increased the time of freight in transit—particularly important in the case of perishables, resulted in embargoes on certain lines and made a serious car shortage this fall a practical certainty.

The government has taken a hand in both strikes through offering aid to mine operators who wish to reopen and through the declaration of a national emergency in transportation and issuance of priority orders on the part of Interstate Commerce Commission. The latter, fortunately, place the important farm products on the preferred list. Government officials are active also in efforts to get the disputing parties to confer together and some sort of settlement under which the strikers will go back to work may be reached at any time.

The trend of business and industrial affairs hinges on the outcome of these labor difficulties. Indications are numerous that if a satisfactory settlement is reached soon, further expansion will take place, although there may be some changes in those industries taking the lead. The auto industry which has been booming, reports a seasonal slump in orders, and a dozen companies have announced price cuts within the last month. Building operations are falling off, and the iron and steel mills are not so rushed as they were. As the pace slackens in these industries which have been taking the lead, others which have been lagging are expected to increase activity.

Financial conditions are highly favorable for a period of prosperity as time money in the east is down to 3¾ per cent, the best commercial paper is quoted at 4 per cent, and bankers' acceptances have been quoted as low as 3 per cent. Nor is the crop moving season expected to tighten the money market materially. The Federal Reserve ratio is at the highest since May, 1917, and Great Britain is adding to our gold supply through shipments sent to pay interest on her debt to our government.

All issues of Liberty bonds have sold at the highest prices known and students of the bond market expected them to advance still further before fully discounting the era of low interest rates believed to be before us.

While the strike situation is a heavy drag on domestic affairs, its effects are not necessarily lasting. The foreign muddle is not so easily or quickly remedied. Inflation in Germany continues and marks have reached a new low of 11½ cents per hundred, or less than one two-hundredth of their par value. Drastic measures will be necessary to prevent a collapse in that country which would drag Austria and Bulgaria along. Italy also is weak financially and the budget of the French government is far from balancing.

Western Range Cattle Start.

An advance guard of several hundred head of western range cattle, mostly in feeder flesh, arrived at Chicago in the last ten days, so that the run appears to be starting according to the usual schedule. Recent observations also indicate a larger range crop of beef than has been generally expected.

Few choice or prime steers are left in the cornbelt and prices on such have held firmly with an $11 top due at Chicago as soon as the right kind arrives. Yearlings are at a discount of 25 cents. With grassers and short-feds coming from all sections and eastern dressed beef markets receding, values on common, medium and good steers have continued to sag. Some of the intermediate sorts are as much as $1 lower than a month ago, and it is probable that the decline has not ended. Most of the grass steers are bringing $8 to $8.75 at Chicago, with a few going to killers as low as $6.50. Steers fed a generous corn ration on grass are cashing mostly at $9 to $9.75.

Feeder buyers are holding back, expecting lower prices later on and more certain transportation conditions. With grass steers available, the selection is much better than a month ago. Stocker and feeder cost this fall promises to average $1 or more higher than last year. Cattle prices in western Canada are extremely low so that the duty of 30 per cent has failed to stop shipments. Chicago received several carloads on the feeder order last week and more are expected.

Unusual Conditions in Hog Trade.

Receipts of hogs at eleven markets last week were 525,000 head, the largest for this season in at least eighteen years, which is as far back as records are available. The ten-year average for the corresponding week is 431,000 head.

Railroads are only accepting shipments to eastern markets at shipper's risk, so that eastern buying has been small. The result was the sharpest drop in months, but part of the loss has been recovered in the last few days, as the wide spread between eastern markets and Chicago stimulated the shipping demand and receipts have decreased.

Consumptive demand for fresh pork has declined, probably due to strike conditions, but the season during which both domestic and foreign distribution of cured hog meats and lard is at its best is near at hand and the foreign outlet has widened steadily for two weeks.

If hog receipts continue to run as large as they have been, prices will not advance, but there is still time for the summer bare spot and a smart upturn in values.

Trend in Lambs Uncertain.

Lamb prices dropped to the lowest level in a month last week, but recovered partly later in spite of a lower dressed lamb market. Eastern shipping orders were curtailed by the rail strike while receipts were slightly above the average for the corresponding week. Since range lambs are playing a dominant role, receipts are not dependable under present transportation conditions and the trend of prices is uncertain. Feeder lamb prices declined, but the movement countryward is too large and the price level still too high for a healthy situation.

Senate Vote Helps Wool Market.

Passage of the 33 cents per pound clean duty on wool in the Senate has given the wool market a firmer tone. Only small quantities are changing hands at present, as mills are fairly well supplied and are waiting the outcome of sales of cloth and of tariff legislation. Buying from the American Woolen Company has been leisurely but the output of nine of its mills has been sold. Woolens are in better demand than worsteds. Since world wool consumption seems to be outrunning production, a shortage of the lower grades of wool is expected to develop eventually.

Exporters Buy 16,000,000 Bu. Wheat.

The long expected export buying of wheat started last week with sales at Chicago, New York and via the Gulf totalling approximately 16,000,000 bushels. Fear of a rail tie-up probably was a stimulating factor. Part of the buying was to fill old sales for early August shipment, so that the amount of new business is unknown.

The rail strike has not affected the movement seriously, as primary receipts for the last week in July were 16,032,000 bushels, which is 40 per cent above the ten-year average for the corresponding week. The first week in Aust marks the high point in receipts as a rule. Car shortage reports are becoming numerous and are apt to be a factor later.

Estimates upon the final yield now range around 825,000,000 bushels, as there has been some improvement in spring wheat in the last months. The Canadian crop is estimated unofficially at around 345,000,000 bushels, compared with 301,000,000 bushels last year. Canada's record crop in 1915 was 393,543,000 bushels. Based on present crop prospects ond home consumption in the last twelve months, the United States and Canada together should be able to export approximately 500,000,000 bushels this year. This would provide about 2,000,000 bushels daily for the next eight months, which is equal to the estimated daily import requirements of the wheat deficiency countries and possibly more than they can pay for. After that time the Southern Hemisphere wheat will become available.

European crop yields are running below those of last year and an increase of 100,000,000 bushels in their import requirements over last year. At the same time conditions continue favorable not only in the United States and Canada, but in other exporting countries of Argentine Australia and India. Broomhall estimates surpluses in exporting countries in the next twelve months at 680,000,000 bushels, and "effective demand" from importers at 656,000,000 to 672,000,000 bushels.

Cash Grain Markets.

The range of cash grain prices follow:

Kansas City—Wheat: No. 2 red, $1.02@1.04; No. 3, $0.98@1.01; No. 2 hard, $1@1.18; No. 3, $0.99@1.17.

Corn—No. 2 mixed, 55@56c; No. 2 yellow 59½@60c; No. 2 white, 56@56½c.

Oats—No. 2 white, 34c; No. 3, 33½@33¾c.

Big Business in Corn.

Corn prices have been maintained but not advanced by huge sales for export in the last two weeks. Domestic consumers also have been buying f... The prospect of another 3,000,000,000 bushel crop as (Turn to Page 11)

Recent Range of Livestock Prices at Our Principal Markets.

Cattle—	Denver.	Kansas City.	Omaha.
Choice and prime heavy steers (1100 lb. up).	$	$9.75@10.60	$9.85@10.50
Good heavy steers	8.50@ 9.25	8.75@10.00	9.25@10.00
Good light steers	8.25@ 9.25	8.50@ 9.80	8.75@ 9.75
Common to choice butcher heifers	4.25@ 7.75	4.60@ 9.00	5.00@ 9.25
Common to choice butcher cows	3.50@ 6.75	3.65@ 6.85	4.00@ 7.50
Bologna and beef bulls	2.75@ 4.50	3.50@ 5.50	3.50@ 6.75
Canner Steers	2.75@ 3.75	3.00@ 4.25	3.00@ 4.50
Common to choice feeders (1000 lb. up)	5.75@ 8.25	6.00@ 8.50	5.25@ 8.25
Common to choice stocker steers	4.50@ 6.50	4.50@ 8.15	5.00@ 7.75
Common to choice stocker cows and heifers.	3.00@ 4.50	3.25@ 5.90	3.50@ 5.75
Hogs—			
Top of Market	$ 10.50	$ 10.25	$ 10.40
Bulk of Sales	9.25@10.35	9.00@10.15	7.50@10.25
Heavy (250 lb. up)	9.00@10.10	9.00@10.00	8.75@10.00
Medium (200—250 lbs.)	9.40@10.45	9.75@10.15	9.65@10.35
Light (150—200 lb.)	9.50@10.50	9.70@10.25	10.00@10.40
Smooth packing sows (250 lb. up)	8.00@ 8.50	7.50@ 8.00	7.50@ 8.75
Stock pigs	9.50@10.40	9.00@10.75	9.00@10.00

National Selling Organization Needed

FARM PRODUCTS SHOULD BE MERCHANDIZED UNDER CENTRAL CONTROL INSTEAD OF "DUMPED."

WINDOW displays of "Grade A Certified Colorado Potatoes" or other trade-marked brands of various farm products, in gay cartons testifying in bright and striking lettering and decorations to high quality and correct quantity will be the newest wrinkle of the modern grocery if scientific methods of marketing farm products are put into effect as advocated by successful business men who have made a study of farm marketing conditions.

Incidentally, there will come uniform prosperity to farmers large and small and a uniform saving on the necessities of life to the consumer; for it will enable the farmer to find the steady market at fair prices all the year around. It will give the housewife assurance of obtaining a graded article of the quality she wants and can use economically.

It will mean that the old potato bag and the ancient apple barrel with a few good apples on top and the rest of its contents tapering off to worm-eaten windfalls must make their exit. It will be an example of modern, money-making, successful ideas applied to the solution of the farmer's greatest problem—how to control the market he serves.

"This could be accomplished," says E. C. Frost, vice president and general manager of the Strout Farm Agency, Inc., a practical farmer and owner of a productice farm in Maine, "by organizing a nation-wide co-operative system for selling farm products."

Must Avoid Market Gluts.

"The system should be under centralized control," said Mr. Frost, "with numerous central stations, like the neck of a bottle, through which should come all the surplus farm products from a given section. From these central stations or 'bottle necks' the surplus should be distributed wherever the best markets lay at that moment. Farm products would not then be dumped into New York when the New York market was glutted and the prices broken, but they would be diverted by the head office to Pittsburgh and other cities where the consumers were crying for them."

Mr. Frost emphatically believes that the farmer must adopt pooling of his crops and co-operative selling if he would eliminate the speculative phases of farming and insure himself of steady prices and uninterrupted prosperity.

"Dumping farm products on local markets at one season is the farmer's greatest handicap," says Mr. Frost. "Ordinary business sense would teach any manufacturer that to glut his market would be a first step in the direction of bankruptcy; yet the unorganized farmer is practising it year after year.

"The apple growers of Washington and Oregon, the fruit growers of California and the orange farmers of Florida have proved that in scientific, co-operative marketing lies success, steady prices in all seasons and continued prosperity. The same plan must be applied to the products of other farming sections.

Official grading, by which the consumer is assured of products up to a standard, and careful packing in standard containers small enough to be easily handled are elemental steps. Potatoes as well as apples must be sold in boxes. The average city family is appalled at the idea of buying a whole barrel of either apples or potatoes at once.

Hold Surplus in Warehouses.

"The most important step is that a national selling organization for farm products be formed under centralized control. Farm products could then be made to flow through natural channels to waiting markets. Eastern farmers now throw their crops on local markets in a mass and break prices. Under a co-operative method the surplus, after the local markets were supplied, would flow to the larger markets of Boston, New York and Middle West and Europe, as naturally as rivers flow to the sea. What the local markets could not absorb at fair prices would be sent where markets would be bare and prices higher.

"The farmers' selling organization would dictate the price for farm products. Why shouldn't it? The manufacturer dictates the price of his product. If he cannot get it he stops manufacturing. Farmers must find the way to do the same; and co-operation is the way.

"There must be warehouses, of course, to hold the surplus of a season and distribute it over the whole year and the whole country. Bankers will give credit to farm selling organizations to enable them to warehouse their products for the farmer will then be on a business basis.

"The nation-wide organization is the master-key to the whole problem and a more universal prosperity."

A Profit-Maker with Roller Bearings and a Much Lower Price

WHEN the new-design International Manure Spreader came on the market in large numbers about two years ago, it immediately met with such an enthusiastic demand that dealers could not begin to fill orders. This machine marked a great advance in good spreader building and the farm public was quick to realize it.

Stop at the McCormick-Deering dealer's store and find out the reason for this pronounced success. Study in detail these great features:

1. Roller bearings at seven points.
2. Power delivered from both wheels.
3. Double ratchet drive with six feed speeds.
4. Short turn front axle; no pole whipping.
5. Rear wheels track with front wheels.
6. Tight bottom.
7. Two beaters and wide-spread spiral.
8. All-steel main frame.

The International Manure Spreader is a wealth producer; it will return extra bushels from the same land; it will return its price over and over and add to your bank account.

And its price has been cut down to an attractive low figure. That is another detail you will find to be true in connection with the International at the store of your McCormick-Deering dealer.

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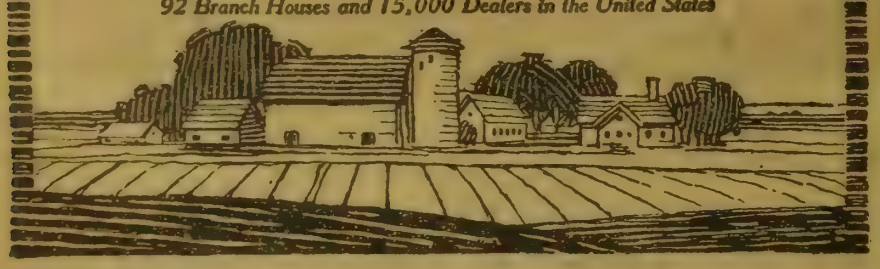

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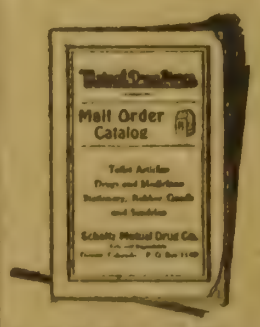

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Plant Only Tested Seed.

Putting in fall wheat? If so, do you know anything about the seed? Has it been tested for purity and germination? Does it contain wild oats, bindweed, Russian thistles, sunflowers or other noxious weed seeds that will cut down your yield and increase the dockage when you market the crop next summer?

These questions are being put to wheat growers by the Colorado Seed Laboratory, which is equipped to make tests for farmers free of charge, that will often save them hundreds of dollars on a single crop. The 1921 wheat crop of Colorado was approximately 22,000,000 bushels. The estimated loss of yield in the United States on spring wheat due to weeds was 12 to 15 per cent, and on winter wheat, 5 to 9 per cent. Using the lowest figure in each case, Colorado's loss in yield due to weeds last year was 1,000,000 bushels. The loss due to dockage, on account of weed seeds, based on United States estimates, was more than half a million bushels to Colorado farmers. Testing the seed would have avoided the major portion of this loss.

Procure a sample of not less than one pound; be sure it is representative of the bulk of your seed. Take small portions from various parts of the bin, mix and send the entire sample, addressing it to State Seed Laboratory, Fort Collins, Colo. A test for germination and purity will be made. It requires about ten days to have this done, and there is no cost for the service.

Poor Lubrication Causes Engine Trouble.

Incorrect lubrication is responsible for fully one-half of all engine troubles according to tractor experts who have made a careful study of this question. It is highly important that the lubrication of the tractor or truck be given the most careful attention during the busy season.

It is pointed out by J. W. Sjogren, farm mechanics specialist of the Colorado Agricultural College, that the oil in the crank case of the motor serves two purposes: First, to provide a thin film between all bearing surfaces to prevent friction; and second, to provide a seal between cylinder walls and the piston rings in order to hold the gas in the compression and expansion. In order to accomplish these two objects the oil must be heavy enough to stand the heat to which it is subjected during the operation of the motor. It is well for each tractor operator to use the oil which the manufacturer recommends for his particular tractor.

Lubricating oil, although chosen from the very best grades, will not last indefinitely. The oil will break down when constantly subjected to heat and use. Considerable gasoline and kerosene will find its way into the crank case, which gradually thins the oil. The oil in the crank case, therefore, should be changed about every 500 miles in the automobile and the truck, and about every four or five days in the tractor. When the oil is changed in the crank case of any motor it is sometimes advisable to wash it out with a quart of clean oil and drain it out before the new oil is put in.

The oil removed from the crank case contains a great deal of dirt and particles of metal and therefore it should not be used for lubricating other machinery. Some farmers use the old crank case oil for killing lice on hogs and it has proven very good for this purpose except on white hogs with tender skins.

Tanning Hides on the Farm.

Tanneries are equipped to make all the leather the country needs and can make better leather more economically than the farmer can, but there are times when the producer of hides finds that the margin between the price paid for the raw material and the price asked for finished leather is so great that he determines to do his own tanning. For example, in certain large sections of the country a farmer can hardly give away the hides he has, yet leather in small pieces costs him from $1 to $1.50 a pound. To help him in such emergencies the United States Department of Agriculture has just issued Department Circular 230, "Home Tanning," which gives detailed directions for making leather for various purposes.

With the issuance of this publication the department now has for distribution information on the handling of hides from the skinning of the animal to the care of the leather in the finished article such as harness, belts, boots and shoes. Farmers' Bulletin 1055, "Country Hides and Skins; Skinning, Curing and Marketing," recently revised and reprinted for the third time, tells how to perform these operations in the most efficient manner. In Farmers' Bulletin 1183, "The Care of Leather," also recently revised and reprinted, are directions for making leather last longer. Any, or all, of these bulletins, including the new circular, may be obtained free by writing to the Department of Agriculture, Washington, D. C.

In the circular just issued the farmer who wishes to do tanning on a small scale may find explicit directions for making bark-tanned sole and harness leather, chrome-tanned leather, and alum-tanned lace leather. But in case he wishes to have the tanning done for him he will find suggestions as to the usual practices, rates and methods of payment. It is the custom among some tanners who do work for farmers having only a few hides, to tan a hide for half the leather. That is, the farmer sends in a hide and gets back one-half of it made into leather, usually paying the shipping charges both ways.

A list of tanneries that will tan one or more hides for farmers may be obtained from the Bureau of Chemistry, United States Department of Agriculture, Washington, D. C.

When high prices are charged for leather in small quantities it is usually possible to buy at a comparatively low price by taking more at a time. If a side of leather is bought, instead of a couple of pounds at a time, says the circular, it is often possible to buy it at only 10 to 20 per cent above wholesale prices.

Warble Fly Serious Pest.

Increasing prices of shoes and harness, destroying thousands of pounds of beef and materially reducing the production of milk is charged against the ox-warble fly. This fly is very similar to the house fly but somewhat smaller.

Among western cattlemen it is known as the heel fly. It lays its eggs on the heels of cattle in July and August. When the larvae hatch they migrate under the skin of the forelegs to the gullet and there remain until about December; then penetrate further through the flesh of the animal to the loins. There they mature, feeding on the flesh and causing open sores on the back of the animals. About March 1 they mature and bore their way out through the skin.

The tanned hides of cattle killed while the sores were open look as if they had been shot through with BB shot over all of the thickest part of the hide where the best sole and harness leather is obtained. Tanners place their loss from these pests at more than 20 per cent. Much of the best part of the meat of affected animals has to be cut away, as it is inflamed by the action of the larvae. Milk cows whose backs are furnishing hibernating quarters for the flies drop off in milk flow.

The ravages of these insects have led entomological societies and agricultural colleges to start an active campaign against them. The Crop Protective Association, an organization of scientists and manufacturers, has appropriated a large sum of money to fight the pests.

To prevent the flies laying eggs at this time of the year it is recommended that a pool or shallow tank of water be provided upon which crude oil or coal tar cresote has been poured and the cattle driven through.

A salve made of five parts vaseline and one part iodoform is recommended for the sores caused by the larvae during the winter months.

Dig Up Grange History.

Grangers are reminded that the golden jubilee year, the fiftieth anniversary of the Colorado State Grange, will soon be here. All the valuable history of the state grange as well as of each subordinate grange should be gathered together by that time. The next state grange meeting will without doubt take some action on this matter. If some action is not taken before all the pioneers of the grange in the state are gone many interesting and valuable historical facts will be lost.

The common cause of fenders rusting at the fastenings is neglect in not washing the under side of the fenders, which are sure to accumulate a certain amount of dirt and mud. A rust preventive or an application of oil will aid in preventing this condition, but the most reliable precaution is to prevent the accumulation of mud.

Marketing Education Needed.

The unfortunate thing about the economic situation in which the farmer found himself in 1920, was that perfectly good plans for co-operative undertakings on the part of the farmers have in many instances proved unsuccessful for the reason that the wrong thing has been expected.

This is the opinion of Dr. H. C. Taylor, chief of the Bureau of Agricultural Economics, U. S. Department of Agriculture, who in discussing the farmer's part in solving the marketing problems, said:

"When falling prices are inevitable, it is unfortunate to ask that a new system of marketing be tried as a means of keeping prices from falling. It is entirely possible that an improvement in the mechanism of marketing may reduce slightly the cost and thus prove itself efficient if operating independently of falling prices and yet be looked upon as a failure because of losses incurred due to the downward swing of the price curve. It is recognized, however, that desperate conditions seem to justify desperate efforts to find some remedy and we can hardly blame the farmers for grasping at anything that gives promise of saving their sinking ship. One cannot feel, however, that if our analysis of the farmer's economic problem had proceeded with an educational campaign a little earlier much of the misfortunes in co-operative undertakings of the last two years might have been avoided.

"The long list of failures of co-operative grain elevators," says Doctor Taylor, "does not point to the conclusion that co-operative marketing is not a good thing for the grain farmer. It simply shows the importance of good business methods on the part of co-operative undertakings, the importance of not speculating on the products being handled and the dangers resulting from dividing all the profits of the fat years among the members and having no surplus with which to take care of inevitable losses in the lean years."

Doctor Taylor says he is thoroughly convinced that "just to the extent that price-fixing as an objective in co-operative marketing is kept in the foreground and the hope of monopoly price for farm products is a dominant motive on the part of farmers in entering co-operative organizations, the movement is doomed to fail. Agriculture includes too large a portion of the total population to prosper without the prosperity of the nation as a whole, and successful co-operation must be based upon efficient service to the public at a fair price, even though its prime objective be the welfare of the co-operators. Even if the farmers were willing to submit to central control regarding the quantity of crops to be planted, nature is so dominant a factor in determining the supply of food in any given year, that control of production is out of the question."

Discussing the results of the recent pig census, Doctor Taylor says it is probable that the American farmers would be better off and the consumers suffer no injustice if a third of the brood sows held for fall litters were marketed at this time.

Good Dam for Laterals.

Half a circular saw, or a piece of heavy sheet iron in the same shape, will be found to be the best dam for laterals when cutting out the water in various places. Bring it down edgewise from the shoulder with force, and it will cut deep enough into the side and bottom of the lateral to make an effective dam at one stroke. No shoveling of soil will be necessary, and the banks will be left intact.—J. H. Freeman, C. E.

Destroyers of Insect Pests.

The bob-white eats the adults or beetles of the corn rootworms, which lay the eggs that later become the larvae or worms and infect the corn. As many as twelve of the beetles, according to the bureau of entomology of the United States Department of Agriculture, have been found in the stomach of one bob-white. The red-headed woodpecker, nighthawk, cardinal, kingbird and phoebe also eat the beetles and reduce the damage done by the corn rootworm.

An Improvement.

"Where you goin', Ma?"
"To a surprise party, dear."
"Aren't you goin' to take all of us?"
"No, dear, you weren't invited."
"But ma, don't you think they'd be a lot more surprised if they saw all of us comin'?"

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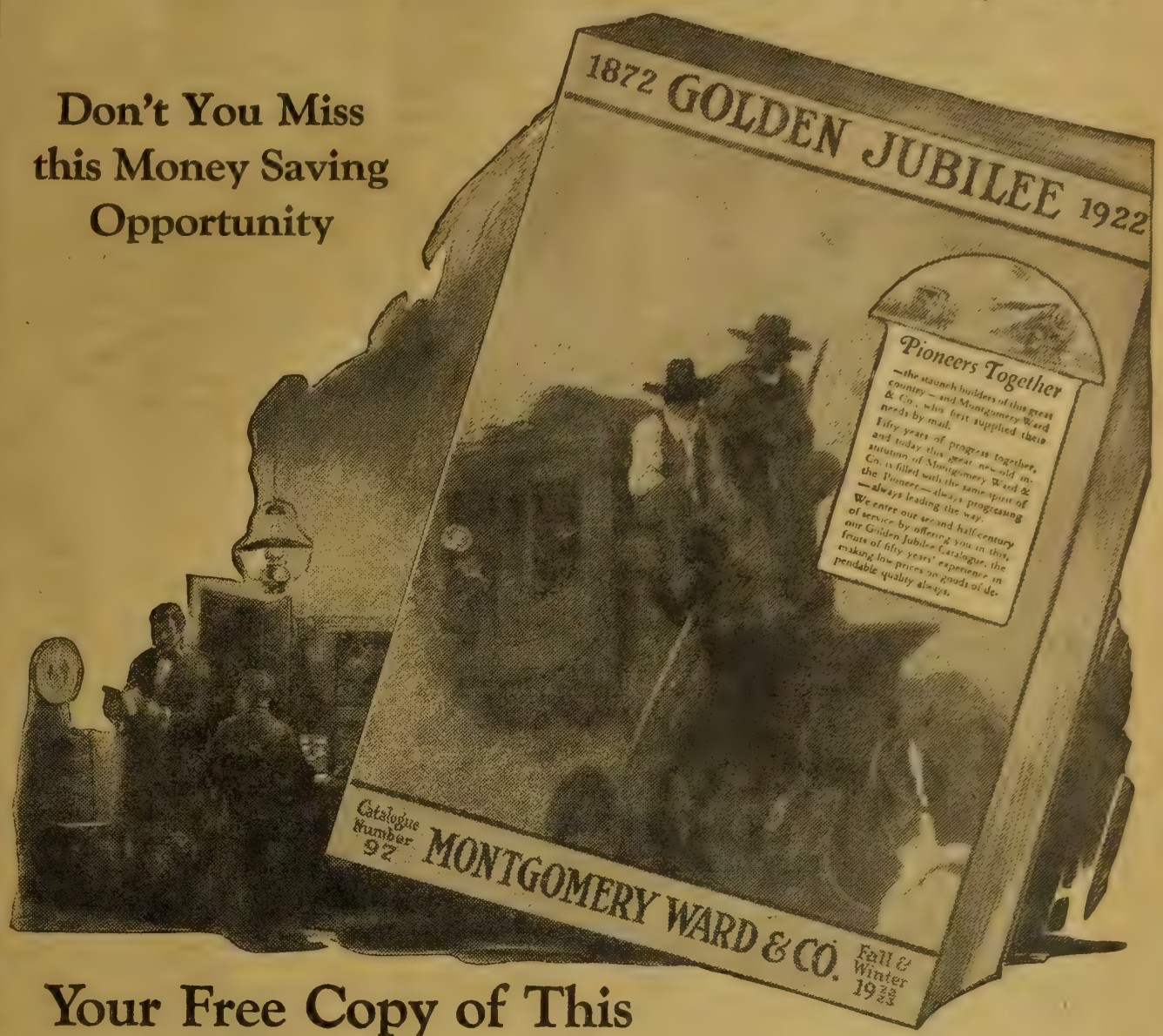

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Town Pays Tribute to Farmer.

Every business house in Fort Morgan closed last Thursday afternoon in honor of the annual picnic of the Farmers' Union of the county, held in the fair grounds adjoining town. Traveling salesmen fumed and fretted because they could not meet merchants as planned, but of no avail. It was farmer's day and during the afternoon farmers and business men of the town and their families mingled on the fair grounds and enjoyed the events of the day on an absolutely common footing. The most unfortunate condition which can exist in a distinctively agricultural community is a spirit of antagonism and distrust between the folks of the town and those of the country. They are mutually dependent upon each other and getting together as was done at this picnic gathering helps to establish this mutual relationship. It was estimated that fully 3,000 persons were in attendance at this picnic meeting which was conducted by the Farmers' Union local. It was of sufficient importance to pull the national president of the Farmers' Union, Charles Barrett, from his home in Georgia as one of the speakers on the program. Jas. Collins, president of the Colorado Farmers' Union, also was there, and the president of the Nebraska Farmers' Union. Other communities might well follow the example set by this progressive body of farm and town business men.

Complain of Unjust Commission Charges.

Livestock organizations are taking advantage of the new law placing public stockyards under Federal supervision by entering complaints as to commission charges for selling stock. Formal charges that the rates for selling livestock are unjust, unreasonable, and discriminatory, and that the business is overdone and over-manned have been made against the livestock exchanges at Chicago, Kansas City, St. Paul, Omaha and Portland, and all commission men market agencies at these markets, and against individual firms at Fort Worth. The American National Livestock Association, the National Wool Growers' Association, and thirteen state livestock associations are sponsors for these charges. The Secretaary of Agriculture sent out notices of the complaints to the defendants July 29, and they were given until September 1 to file answers to the charges.

The producers' organizations making the complaints represent that the livestock commission charges are substantially 100 per cent higher than those prevailing on these markets in 1905, that they are unlawful and should be reduced. They also complain that charges are discriminatory in that a greater average per-car charge is imposed and collected on shipments of certain classes of light-weight livestock than is imposed on heavier animals where a smaller number is loaded in a car. They also point out that in assessing charges no distinction is made as to the value of the individual animals, or the gross [illegible] value of animals selling at a low price as compared with those selling at a high price. Further, they complain that charges for the sale of mixed livestock in carlots, and for the sale of unmixed or mixed livestock of two or more owners, and for the purchase of stockers and feeders, are unjust, unreasonable, and discriminatory.

The complaining associations ask, on behalf of all shippers of livestock to the markets mentioned, for an award of damages against the defendants by the amount of commission charges collected over and above what may be determined by the Secretary of Agriculture to be reasonable and just, reparation to date from the time these agencies became registrants under the act.

The producers' organizations also direct attention to the alleged general belief of stockmen that the livestock commission business is overdone, that there are too many men engaged in it, and that because of the large number gaining a livelihood from it an unfair, unjust, and unreasonable burden is imposed on the shippers of livestock.

Livestock men will watch with interest the results of this hearing. There are two sides to most questions and the exact nature of the services rendered by the selling firms will without doubt be presented in answering the charges.

Hearing on Fraudulent Holstein Records.

After exhausting every legal means of delaying the action of the National Holstein-Friesian Association in its attempt to cancel dishonest records, Oliver Cabana, Jr., of Pine Grove Farm will have to appear before the board of directors on September 12 with such evidence as he can present in defense of the records in question. This case has been dragging on for several years and Holstein breeders will be glad to know that at last the association can go ahead with its policy of concelling any records which can be shown to have been dishonestly made. Nothing can so quickly discredit a purebred record association as unreliability of its records. For three years the officers of the Holstein association have been striving to clean up this Cabana matter. Some thirty records are involved. Mr. Cabana's last attempt to prevent action was to attack in the courts the legality of the Kansas City meeting and the election of the directors at that time. This was decided against him in the New York state courts. He has apparently exhausted his resources and it is to be hoped that at this hearing the evidence will be carefully weighed and all records shown by the evidence to have been made fradulently, cancelled.

Featuring Farm News.

One of the encouraging features of the times from the standpoint of the agricultural industry is the consideration being given to farm news in publications of general nature. Many of our magazines and publications of national standing are making a serious attempt to interpret agriculture to the general reader. Occasionally the genuine "dirt" farmer has reason for criticising the articles appearing, but in the main the printing of material honestly endeavoring to set forth the true nature of agricultural problems will result in good to the whole country. A recent issue of the Review of Reviews might almost have been designated as an agricultural number. Among the articles were, "The Farmers—A New Intellectual Force," by Carl R. Woodward, publicity director of the Farm Bureau of New Jersey; "Railroad Wages and the Farmer," by David Friday, president of the Michigan Agricultural College; an article entitled "The Great Lakes Seaway," another "Co-Operation—A Hopeful Tendency." Other publications of similar standing are publishing articles of like character. All this is in line with getting the public generally to appreciate the basic character of agriculture and helping to establish the right sort of relationship with other industries.

Federal Butter Standard Proposed.

The Federal butter standard bill has been reported out by the Committee on Agriculture. This bill defines butter as a food product, which is made exclusively from milk or cream, or both, with or without coloring matter, and containing not less than 80 per cent of milk fat. If this bill passes we shall have a law fixing the butterfat content at 80 per cent, and a ruling under the Internal Revenue Bureau limiting the moisture content to 16 per cent.

The farm bureau representatives favored the 80 per cent butterfat limit, but thought it should apply only to commercial butter manufacturers and not to farmers making dairy butter. It was contended at the hearings that while the farmers aim to make good butter, mostly running above 80 per cent, few of them are equipped for regulating the butterfat or moisture content of butter to an exactness required by the proposed law.

No Strike Settlement in Sight.

The coal and railroad strikes drag on with little indication that the two parties at war are nearing a settlement of their grievances. Meanwhile the public, of which the farmers are a large part, must sit quietly by and watch them fight it out no matter how much suffering and inconvenience may result. The public is coming more and more to the belief that these two great industries are so intimately involved in making our natural resources available to all the people that some sort of plan must be worked out which will establish justice between labor and operator, representing the interests of capital, that will protect the public from the suffering resulting from the present method of settling difficulties by open warfare. Our financial interests as represented by the Federal Reserve Board adopted the drastic policy of deflation even though warned that this policy would so demoralize agriculture as to react on the business of the whole country. The farmer had to take his medicine. Organized labor is now resisting most strenuously any attempt to reduce wages to conform to the lower price levels. Between these two opposing policies, the one standing for lower price levels and the other insisting that there shall be no deflation, there seems little hope of agreement unless some greater power in the form of public opinion and pressure from organized agriculture shall force a compromise.

Good Cream to Make Good Butter.

High grade butter cannot be made from low grade cream. Any expert butter maker will back up this statement. It naturally follows that low grade butter must be sold at a lower price than high grade butter. Creameries must buy their cream on the basis of what they can get for the butter made from it. If only a few patrons ship high grade cream it doesn't help much, for it cannot be handled separately, and the result is that even the producer of high grade cream suffers because the butter cannot command the top price. To reap any financial results requires united effort to produce and ship cream of high grade. The manager of a large creamery in Kansas recently stated that farmers and dairymen of that state were getting 20 per cent more for their cream than a year ago. Of course, a part of this is due to the general advance in prices of dairy products, but he attributes part of the advance to the fact that a systematic campaign has been made all over the state by the State Dairy Association in cooperation with the creameries to raise the quality of the cream produced. Here is food for thought on the part of cream producers of Colorado and the mountain states and the organizations furthering the dairy interests.

Do Not Lose Vote at Primary.

Every legal voter has an opportunity at the primary election, September 12, to express his choice of candidates for public office. Voters who fail to exercise this duty of citizenship have no right to complain as to candidates placed on the ticket. One of the weak points in the primary system is the carelessness of voters in going to the polls and expressing their preferences. The date of the primary is September 12. The days for registration are September 5 and 11. If you are not sure your name is properly registered on the polling lists, look after the matter on one of the appointed days. Your local election board has the matter of registration in charge.

Who Is "Slave Farmer"?

A man submitting a perfectly legitimate inquiry, and even enclosing stamp for personal reply, simply signs himself "Slave Farmer." Now, it is our policy to answer every legitimate inquiry by mail, but we cannot do this if the writer withholds his or her name. Only a very small part of the inquiries answered are printed in the Farmers' Service Bureau department of the paper. If you receive no answer to your letter perhaps it is because you failed to sign your name. Initials only are given in the answers to the inquiries in the paper. If "Slave Farmer" will supply his name we will gladly endeavor to answer his inquiry.

Big Livestock Sale.

Just as the form closes for the editorial page we learn that September 12 has been set as the date for a Duroc Jersey sale by the Blue Ribbon Livestock Company ,of which C. F. Burke, the pioneer breeder of Durocs in this state, is manager. For nearly twenty years the Blue Ribbon herd has been exhibiting at the fairs and shows of Colorado and other states. The sale will be held at the State Fair grounds, Pueblo. Catalogs are ready for distribution.

From the Nation's Capital

VOIGHT BILL OPPONENTS ARGUE THAT WHOLE MILK NOT ESSENTIAL IN HUMAN DIET.

E. E. Reynolds.

THE wool tariff schedules occupied the center of the congressional stage during July, with Senators Gooding of Idaho, Bursum of New Mexico and Smoot of Utah leading the fight for the 33 cent a pound duty on scoured content, while several Eastern senators from the industrial centers were persistent in their opposition to wool protection although they made little protest against the so-called compensatory duties on woolen manufactures.

The wool tariff debate ended in a complete victory for the Western wool tariff bloc. Practically every effort made by the opposition to defeat the committee amendments was promptly voted down, and the program went through about as planned by the Senate committee on agriculture.

There have been high wool tariffs before; but it is explained by the advocates of the pending bill that the farmer never did get his share of the wool tariff. Even the Payne-Aldrich law was something of a gold brick so far as it afforded protection to the wool grower. It imposed a duty of 11 cents a pound on imported wool in the grease. Senator McCumber, chairman of the Senate committee that has the tariff in charge, says that this was for the purpose of giving the producer of wool in the United States a protection of 11 cents a pound, and assuming a loss of 66⅔ per cent between the wool in the grease and the scoured content. But the importers did not import wool that lost 66⅔ per cent in scouring; on the contrary, they imported the fleece after it had been skirted, that is, closely trimmed, so that the manufacturers had to pay only about 18 cents compensatory duty, and the wool grower, instead of getting an advance of 11 cents, secured a protection of from 6 to 7.6 cents a pound.

"In remodeling the tariff" said Senator McCumber "we have taken extra precaution to guarantee that the producer of wool shall have the equivalent of 33 cents upon the scoured content."

"Under the bill as it was reported to the Senate," said Senator Smoot, "no one is going to get any advantage. The wool grower gets the protection given him and no one can take it away from him. The manufacturer does not get one penny of the protection beyond what the bill gives, and he cannot take it out of the wool grower as he has done in the past."

Much was made by the opposition on the effect the wool tariff may have upon the cost of clothing and other woolen fabric materials. Senator Walsh of Massachusetts stated that "hardly a word has been said during the whole debate about the great army of consumers in this country upon whom the rates in this schedule will bear more heavily than will the rates in any other schedule in this tariff bill."

Discussing this cry about the alleged great burden of the wool tariff on the consumer, Senator McCumber said that it took 3½ yards to make a $90 suit of clothes and the little duty upon the cloth is a bagatelle compared with the labor cost and the overhead cost in a suit of clothes."

Senator Jones of New Mexico argued in favor of defeating the pending tariff bill as a means of retaining the emergency, which he contends gives more protection to the growers of fine wools than the 33 cent a pound scoured basis rate.

"I think my good friend from Idaho, Senator Gooding, has gone too far," said Senator Jones. "By giving up the emergency tariff law and voting for these high protective duties upon manufactured products he has been voting so as to injure the farming interests in this country. Why not keep the present emergency law, rather than pass this bill which is increasing by enormous amounts the duty upon manufactured products where no further protection is needed, where it will have the effect of increasing the prices of these commodities to the consumer where it will have the effect of making the farmers of this country surrender to the manufacturers of the country what little benefit they received through the emergency tariff law? Those who are really interested in the welfare of the farmers should vote against this bill and therefore permit the emergency law to remain in force." Then, according to Senator Jones, the tariff of 15 cents a pound upon wool in the grease and of 45 cents a pound upon scoured wool would continue, and the old "skirting joker" clause of the Payne-Aldrich law was removed specifically by the terms of the emergency tariff law. He also referred to the statement made by Senator Lodge of Massachusetts and others that there are 107,000,000 pounds of wool in bond in the warehouses of Boston today awaiting the passage of this bill so as to come in at a lower rate of duty under this bill than of the emergency tariff law.

—x—

Burlap Bag Tariff is a Tax on Farmer.—One or two amendments reducing the compensatory tariff on certain lines of textiles were adopted. An amendment was also adopted taking burlap bags from the free list and imposing a duty thereon of one cent a pound. It is estimated by the American Farm Bureau Federation specialists that this duty on burlap bags, in the case of fertilizers alone, which are delivered to the farms in burlap bags, will cost the farmers $800,000 additional annually.

—x—

Opponents of Voight Bill Present Arguments.—Hearings on the Voight filled milk bill are being held before a subcommittee of the Senate Committee on Agriculture. This time the opponents of the bill are being heard and are showing their hands.

A representative of the National Cotton Seed Crushers' Association opposed the Voigt bill, basing his opposition on the grounds that while little or no cotton seed oil is now used in filled milk, if no legislation is enacted to prohibit its manufacture a large outlet for cotton seed oil may be developed.

The attorney for the Hebe Company declared that the anti-filled milk agitation was inspired and promoted by competitors of the company engaged in a trade war, while a Chicago child specialist argued that children thrive on skim milk, and that whole milk is not an essential to the human diet.

Advocates of the Voigt bill quoted Justice Charles H. Crownhart, who wrote the decision in Wisconsin Supreme Court in the Hebe case in which he pointed out that the compounds used in filled milk are "in exact imitation of the genuine evaporated milk. They are produced and sold by the manufacturer cheaper than the genuine. They are susceptible of being sold to the public for the genuine at the same price. They are therefore capable of being used for fraudulent purposes and to deceive purchasers. If used as a substitute for milk, the public health may be impaired, not because the compounds are in themselves deleterious, but because they lack in certain food elements essential to a well balanced dietary."

How did your neighbor's last bargain tire turn out

PROBABLY you know at least one car-owner who is always on the look-out for the cheapest tires he can find. He likes to get them by mail or at a sale or at some place where they have big red bargain signs over the door.

It would be fine if he could get "the edge" in every tire trade.

But the dealer can't afford to let him have it.

* * *

Even if a man saw any slight percentage in tire shopping at all—it disappeared when the "Usco" brought the price down.

A *standard* product—and the dealer sells it with pride.

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An out-in-the-open tire. The dealer sells you confidence, not price. He wants you satisfied with performance and value. The only way he knows to get your business is to deserve it.

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* * *

Compared with the ten-minute thrill of the bargain appeal, the "Usco" is just plain common-sense.

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USEFUL for all the little ailments—bumps, bruises, sores, sunburn and chafing. Keep a bottle in the house. It's safe and pure. It costs very little.

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Trained Nurses Earn $30 to $50 a Week

Our training school offers facilities of big, modern, standard hospital. Full three year course of instruction. Lecture and class room special courses. Diplomas acceptable to all state boards.

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The Rural Household

Questions about home problems promptly answered by letter and through the magazine. Letters from women containing helpful suggestions for improvement of rural life are always welcome. Address all communications to Mary G. Collopy, Editor Home Department, Western Farm Life, Denver, Colo.

It's today that I am livin',
Not a month ago;
Havin'; losin'; takin'; givin';
As time wills it so.
Yesterday a cloud of sorrow
Fell across the way;
It may rain again tomorrow,
It may rain—but, say,
Ain't it fine today?
—James Whitcomb Riley.

My Neighbor's Story.

Does a vacation pay? Tell us what you think. One of our readers, Mrs. J—, sent in the following answer:

"We farmed for thirty years. This year we moved to town. My husband and I have just returned from ten days' vacation in the mountains. We both feel as if we had renewed our youth and we realize, too late, that we might still be enjoying farm life if we had only been wise enough to take a short vacation each year or two. No farm woman can afford not to afford a vacation."

Plays for Community Use.

Because of the many requests which came in response to our offer in issue of July 15 we decided to publish the following list of plays and publishers, selected by Nathaniel Reid from the extension division of Washington State Agricultural College:

Humorous One-Act Plays.

Title, No. male and female actors, and publisher):
"Bargain Day," 2 m., 2 f., Samuel French.
"The Bracelet," 4 m., 4 f., Samuel French.
"Dear Departed," 4 m., 2 f., Samuel French.
"Flower of Yeddo," 3 m., 1 f., Samuel French.
"Food," 2 m., 1 f., Samuel French.
"Gentle Jury," 1 m., 12 f., Samuel French.
"Holly Tree Inn," 3 m., 4 f., Samuel French.
"Play Goers," 3 m., 3 f., Samuel French.
"Queen's Messenger," 1 m., 1 f., Samuel French.
"Bardwell vs Pickwick," 5 m., 2 f., Walter Baker.
"Obstinate Family," 3 m., 3 f., Walter Baker.
"Peter," 1 m., 2 f., Walter Baker.
"His Model Wife," 3 m., 7 f., Penn. Pub. Co.
"Neighbors," 2 m., 6 f., Huebsch.
"The Rainbow Kimono," 0 m., 9 f., Dick & Fitzgerald.
"Six Cups of Chocolate," 0 m., 6 f., Harper Bros.
"Spreading the News," 7 m., 3 f., Luce.
"Work House Ward," 2 m., 1 f., Luce.

Serious One-Act Plays.

"The Arrow Maker's Daughter," 0 m., 13 f., Samuel French.
"The Bishop's Candle Sticks," 3 m., 2 f., Samuel French.
"In 1919," 1 m., 2 f., Samuel French.
"The Land of Heart's Desire," 3 m., 3 f., Walter Baker.
"A Night at an Inn," 8 m., 0 f., Luce.
"The Silent Voice,'" 6 m., 1 f., Harpers.
"The Terrible Meek," 2 m., 3 f., Harpers.

Farces in Two or More Acts.

"Before Breakfast," 4 m., 3 f., Milo Bennett.
"Hello Bill," 5 m., 4 f., Milo Bennett.
"The Commuters," 6 m., 8 f., Samuel French.
"Green Stockings," 6 m., 6 f., Samuel French.
"Officer 666,'" 7 m., 3 f., Samuel French.
"Pair of Spectacles," 8 m., 3 f., Samuel French.
"Stop Thief,'" 8 m., 4 f., Samuel French.
"What Happened to Jones," 7 m., 6 f., Samuel French.
"Some Baby," 6 m., 4 f., Sanger & Jordan.
"Seven Keys to Bald Pate," 9 m., 4 f., American Play.
"Yellow Jacket," 17 m., 12 f., American Play.

Comedies in Two or More Acts.

"Bought and Paid For," 3 m., 3 f., Samuel French.
"Fanny and the Servant Problem," 5 m., 13 f., Samuel French.
"College Cinderella," 4 m., 8 f., Samuel French.
"Peg O' My Heart," 5 m., 4 f., Samuel French.
"Pomander Walk," 10 m., 8 f., Samuel French.
"Prunella," 11 m., 7 f., Little, Brown.
"The Drone," 6 m., 3 f., Luce & Co.

Dramas in Two or More Acts.

"Kindling," 6 m., 6 f., Am. Play Co.
"Passing of Third Floor Back," 6 m., 6 f., Am. Play Co.
"The New Sin," 7 m., 0 f., Samuel French.
"Milestones," 11 m., 14 f., Doran & Co.
"Servant in the House," 5 m., 2 f., Penn. Pub. Co.

Plays in book form may be purchased from the following publishers: Walter Baker & Co., 5 Hamilton Place, Boston; Dramatic Publishing Co., 542 S. Dearborn St., Chicago; 47 Workshop, Harvard University, Cambridge, Mass.; Samuel French, 28 W. 38th St., New York; Penn. Publishing Co., 925 Filbert St., Philadelphia; Dick & Fitzgerald Pub. Co., New York; Yale University Dramatic Association, New Haven, Conn.; Huebsch Publishing Co., 32 W. 58th St., New York; Jno. W. Luce & Co., 212 Sumner St., Boston; Little, Brown & Co., 34 Beacon St., Boston; Geo. H. Doran Publishing Co., New York; Drama League Book Shop, 7 E. 42nd St., New York.

Plays in manuscript form, with director's prompt book and parts, may be obtained from the following publishers: Alice Kauser, 1402 Broadway, New York; American Play Co., 33 W. 42nd St., New York; Milo Bennett Exchange, 36 W. Randolph St., Chicago; Century Play Co., 1400 Broadway, New York; Darcy & Woldford, 1402 Broadway, New York; Sanger & Jordan, 1432 Broadway, New York.

Suggestions for Church Suppers.

The chairman's work is most important. She must plan the work and see that committees carry out the plans.

The time set for a church supper does not bring confusion if all work has been well planned before hand.

Decide on price per plate. The price is governed by the circumstances of your patrons. The menu must be adapted to the price. A fair profit is approximately double the cost of the plate including labor and fuel. If the latter items are donated, reduce the cost accordingly.

Points to be kept in mind in planning a menu are: Amount of work, the season, your patrons, serving facilities, cooking accommodations and the nourishing and attractive qualities of the food.

The season of the year will decide, in part, the menu; hearty foods in fall and winter, attractive and appetizing dishes in spring and summer. Foods in season are naturally more reasonable in price. Do not serve chicken or creamed eggs when your poultry products are bringing the highest prices.

A simple meal daintily and promptly served is always preferable to many dishes carelessly and tardily served. Have the plates thoroughly heated before serving the dinner course.

A pleasing appearance of the plate can be obtained through proper attention to color and flavor.

For instance, do not serve pickled beets and tomatoes, nor two creamed dishes, nor two rather flavorless and colorless vegetables, such as canned corn and scalloped potatoes, at the same time. Two creamed dishes give the plate a messy appearance.

Be generous but not wasteful in your serving. It is possible to make a fair profit without resorting to meager serving.

Note—Because of limited space this article will be continued in the next issue.

Our Fashion Service.

All patterns 12 cents each. Address Western Farm Life, Pattern Department, 1518 Court Place, Denver, Colo.

Read This Before Ordering: Patterns ordered through this magazine are mailed promptly from the factory at Brooklyn, N. Y., and arrive in 10 to 12 days from time order reaches Western Farm Life. Be sure to specify size and number of patterns. Write your name and postoffice address plainly to avoid delay. These patterns are handled at cost, as a service to our women readers. The price of 12 cents includes postage.

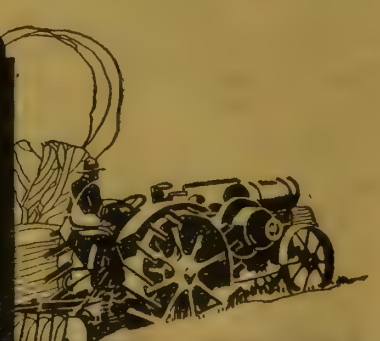
CATALOGUE NOTICE.

Send 12 cents in silver or stamps for our UP-TO-DATE FALL AND WINTER 1922-1923 BOOK OF FASHIONS, showing color plates, and containing 500 designs of Ladies', Misses' and Children's Patterns, a concise and comprehensive article on dressmaking, also some points for the needle (illustrating 30 of the various simple stitches), all valuable hints to the home dressmaker.

3753—A Popular, Comfortable Dress Style for the Growing Girl. Pattern 3753 is here attractively illustrated. It is cut in three sizes: 12, 14 and 16 years. A 14-year size requires 2¾ yards of 36-inch material for the Dress and 2¼ yards of 32-inch material for the guimpe. Figured gabardine is here combined with crepe de chine. Satin and serge, tricolette and organdy, silk and twill may be combined for this design.

3997—A Pretty Frock for Mother's Girl. White organdy, voile, crepe or batiste is attractive for this model. The tunic por-

Is Your Tractor Always Overheated



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Grease Cups:
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Get the CONTINENTAL LUBRICATION CHART

OVERHEATED tractors don't earn profits, in the long run. Sooner or later they are up for repairs and every day means a loss of many dollars.

Operation with an inferior oil or with oil of the wrong body may shorten the life of your tractor by many years.

We are advising tractor owners to get the Continental Tractor Lubrication Chart and *stay with it.* It specifies for practically every tractor made. You can rely absolutely on the recommendation it makes for *your* tractor.

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TRACTOR LUBRICATION

Motor:
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Transmission
Oil

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Tractor Grease

tions may be omitted. Lace, banding, lattice work and embroidery are good for trimming. The pattern is cut in four sizes: 8, 10, 12 and 14 years. A 10-year size requires 5¼ yards of 32-inch material.

4003—A Neat and Practical "Apron Frock. It will take but a few moments to adjust this trim and comfortable garment. One could make it of figured percale with a finish of rick rack—or feather edge—braid. The closing is at the side under the facing. In black sateen with cretonne for trimming, or in crepe in a pretty shade of yellow with bands of white, it makes a smart "tea" frock. The pattern is cut in four sizes: Small, 34—36; medium, 38—40; large, 42—44; extra large, 46—48 inches bust measure. A medium size requires 4¼ yards of 36-inch material. The width at the foot is about 2⅛ yards.

4005—A New Version of a Popular Garment. Every woman's wardrobe should boast of one or more slips such as this design portrays. Satin, silk, crepe, crepe de chine, and linen are very appropriate for this style. The pattern is cut in four sizes: Small, 34—36; medium, 38—40; large, 42—44; extra large, 46—48 inches bust measure. A medium size requires 5½ yards of 27-inch material. For flouncing as illustrated 2⅜ yards 15 inches wide will be required.
FSu 13

Market Outlook for Farm and Ranch Products.

(Continued from Page 5.)

shown by unofficial estimates was noticeable in the December delivery at Chicago, which has declined about 10 cents a bushel from the high point of the season. Primary receipts last week were approximately 5,500,000 bushels, compared with a ten-year average for that week of 3,800,000 bushels. The visible supply at terminals is close to the largest on record for this season.

Hay Supply Increasing.

Nearly all the old hay crop has been sold, leaving an unusually light carryover. Receipts of new hay at markets near the producing sections are increasing and prices are slightly easier, although the rail strike has stimulated buying. The market may sag a little lower.

Kansas City—Prairie upland No. 1, $10.50@11.50; No. 2, $9@10; alfalfa, choice $17@19; No. 1, $15@16.50; standard, $13@14.50; No. 2, $11@12.50; No. 1 timothy $14@15; No. 2, $10.50@11.50; No. 1 light clover mixed, $14@14.50; No. 1 clover mixed, $11.50@13.50; straw, $7.50@8.

Eggs Lowest in Six Years.

Egg prices dropped to the lowest level in six years last week. Weather favors maintenance of heavy production both here and in Canada. Receipts are dropping off rather steadily, but remain above the average for this season and storage holdings are still increasing. The increase in storage holdings at the four leading markets alone during July has been enough to make a total of 10,000,000 cases for the entire country on August 1, or 28 per cent higher than ever before known. The present price level for fresh eggs appears to have discounted these conditions, however, and an upward rather than a downward trend in fresh egs is to be expected.

Denver—Eggs, 25@27c. Hens, 23@26c; springs, 35c; broilers, 43c; roosters, 15@17c; geese, 30@32c; ducks, 30@32c; turkeys, 27c.

Butter Market Unsettled.

Lower prices for butter attracted extensive buying by storage operators last week and caused a sharp upturn in the market, but the tone remains unsettled. Receipts have decreased steadily for six weeks, but the total is above the average at this season and there is a large surplus if operators desire to store it. Domestic consumption of butter shows a big increase over last year and there is probability of export demand with small imports at the present level of prices.

Prices for 92-score fresh butter on August 3 were: Chicago, 32½c; New York, 34½c; Boston, 35½c; Philadelphin, 35c.

Fruits and Vegetables.

Potato prices declined further last week, but receipts have dropped approximately to normal size for this season and the slump should be checked soon. Virginia, New Jersey, Maryland and Kansas are the leading shippers. Kansas Irich cobblers are quoted at $1.20 and Minnesota Early Ohios at $1.10 in the Chicago carlot market.

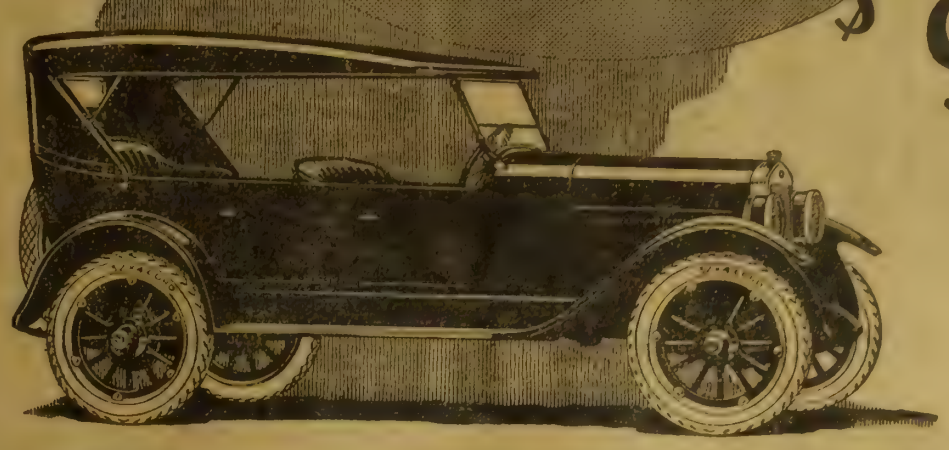
The official forecast upon the commercial production of onions in seven intermediate states is 6,753 cars. The acreage in fourteen late producing states is estimated at 38,100 acres, compared with 35,200 acres in 1921. Total shipments of onions from producing sections up to August 1 amounted to 7630 cars, compared with 6,783 cars to the same date last year.

The New Oakland Six

$995

Prices at Factory

Chassis	$ 795
Roadster	975
Touring Car	995
Sport Car	1165
2 Pass. Coupe	1185
4 Pass. Coupe	1445
Sedan	1545



Touring Car

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They will tell you that they have never driven a car more powerful, more flexible, more economical or more unwaveringly dependable.

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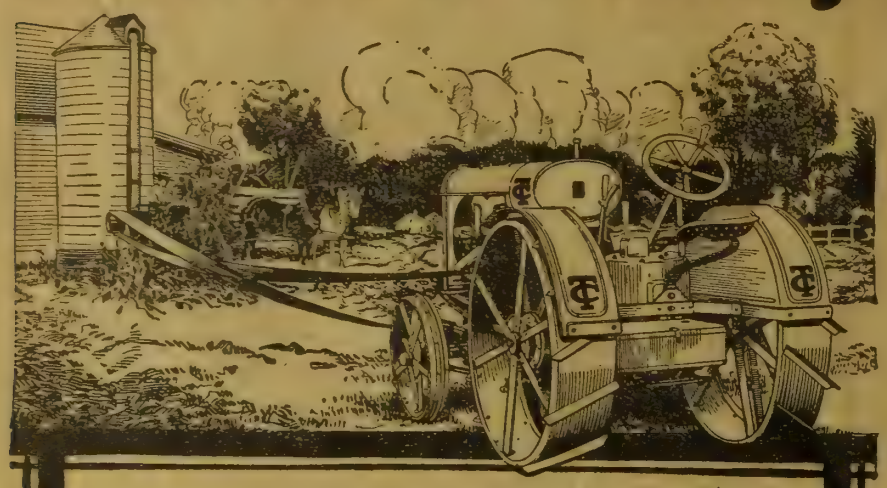

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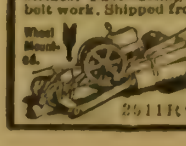

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Readers are invited to make generous use of this department. Questions regarding any branch of farming, livestock production, animal diseases, legal matters pertaining to the farm, homestead inquiries and the like cheerfully and promptly answered by letter and through the magazine. Address all communications to SERVICE BUREAU, WESTERN FARM LIFE, Denver, Colorado.

Sterility in Sow.

I have a fairly well bred Duroc Jersey sow twenty months old, weighing about 450 pounds. This sow fails to breed. Some of my neighbors say she is too fat. Is this likely to be the trouble?—J. J. F., Otero County, Colo.

Excessive fat is a very frequent cause of sterility in brood sows. Try reducing this sow in flesh by cutting down on her feed, and particularly on such feed as corn. Encourage her to take plenty of exercise. See that she has plenty of alfalfa, either as pasture or hay. After the sow is somewhat reduced in flesh try breeding her again.—G. C. W.

Plans for Manure Pit.

We are getting ready to install a litter carrier in our dairy barn, which is of modern construction with cement floors and steel stancions. We are now milking twenty high-grade Guernsey cows and expect to increase in a few years to forty. What is the better plan, to dump the manure in the manure spreader and spread it at once, or build a cement manure pit into which to dump the litter carrier, hauling the manure out whenever convenient. If the manure pit plan is to be recommended, what size should it be for forty cows? We keep them outdoors whenever the weather is suitable. —C. W. F., Weld County, Colo.

As a rule the plan of hauling out and spreading manure from a cow barn as it accumulates is the better plan. This is not always possible, particularly where a large number of cows are handled. In this case it may be necessary to dump the cleanings from the stable and haul and spread the manure later. A good cement manure pit is a very desirable addition to the facilities for handling the manure from a large dairy barn. In plans for making such pits, furnished by the Portland Cement Association, Chicago, a pit 40 by 24 feet, averaging 4 feet in depth, is recommended for forty cows. Of course, where the cows are out a great deal the pit need not be as large as where they are kept in the barn a good share of the time. Booklet F-14, published by the Portland Cement Association, Chicago, takes up the use of concrete on the dairy farm and has a chapter devoted to the making of manure pits. It is sent free on request.—G. C. W.

Damage From Private Reservoir.

A reservoir on my eighty-acre farm floods about ten acres and the man formerly using the water had been paying me a sum of money each year for the damage. The property has now changed hands. What kind of claim do I have on the new owner? I also let the former owner have a strip 20 feet wide on one side of the eighty for a ditch to conduct the water from the reservoir and also let him have use of a road. This arrangement continued for three years, but there was no contract and no right of way was deeded. Can I close the road, make a new agreement, or do I have no rights at all?—M. D. B., Conejos County, Colo.

You should enter into new agreements with the new owner of the land regarding the matters you mention.—Hamlet J. Barry, Equitable Building, Denver.

Bank's Claim on Homestead.

After taking an additional homestead adjoining my place I gave a mortgage on the home place, which will be foreclosed in November. I can prove on the additional homestead now or can wait another year. Can the bank take the additional homestead at that time if I have the land in my name? Or can they take it any time afterwards with a judgment against me? Must I be living on the additional homestead to hold it at the time of foreclosure? My wife has personal property on the place which is not named in the mortgage and is otherwise clear. Can the bank take this property from her?—N. V. E. B., Wyoming.

Assuming some facts not given, I would state that the bank has no claim on the additional homestead nor can it get anywhere with a judgment rendered before you acquired the homestead. Your living on the additional homestead would be only as required for your proof. The personal property of your wife not in the mortgage will not go to the bank unless it has a deficiency judgment and your wife has signed the note, in which case the property could be taken under execution and levy.—Hamlet J. Barry, Equitable Bldg., Denver.

Dusty Quarters Bad for Pigs.

Can pigs be affected by the gape worms such as affect little chickens? I have some weanling pigs that are coughing. They have been rooting in the dirt floor of the chicken house where the old litter is about a foot deep. The cough spread through the litter in three days. They stick their tongues out and work their jaws when they cough.—N. W., El Paso County, Colo.

Pigs are not subject to the gape worms which attack little chickens. I think the trouble with your pigs results from permitting them to root in this dirt on the chicken house floor. It is never a good plan to permit pigs to run in dusty, dirty quarters. I would get them away from this dirty floor at once onto some perfectly clean ground, pasture if possible.—G. C. W.

Alsike Compared with Alfalfa.

Is alsike clover as productive as alfalfa? Is it hardy and will it bloat stock? How does its feeding value compare with alfalfa?—C. B., Nevada.

Alsike clover is commonly grown in pasture mixtures. It is somewhat inclined to droop down on the ground as it grows, not standing erect like alfalfa. It is seldom grown as a hay crop and does best on land inclined to be somewhat wet. In tame grass mixtures on low lying lands not well enough drained for alfalfa it makes a desirable crop, but cannot be considered as equal to alfalfa under conditions suitable for the growth of alfalfa. In total digestible nutrients, alsike clover is somewhat below alfalfa, the deficiency being principally in the protein. Like all clovers, green alsike has a tendency to cause bloat when eaten heavily by cattle.—G. C. W.

Right-of-Way for Ditch.

How can I get a good title to a ditch across another man's land? Also across State land or Government land?—S. R. W., Montezuma County, Colo.

Statutes R. S. 1908, Sec. 3167, and following, provide among other things for a right-of-way for ditches over land and condemnation through the right of eminent domain may be resorted to. No piece of land is to be burdened with more than one ditch. Under the condemnation proceedings the benefits and damages will be assessed. Through the government land you can get permission and also through the state land.—Hamlet J. Barry, Equitable Bldg., Denver.

Cannot Repudiate Note.

In taking out a life insurance policy the agent took my note for $120, which was $13 less than the regular premium. Later I learned it was illegal for the agent to cut the premium and for me to accept it. I refused to accept the policy when it came and now do not want it at any price. Can they collect the note? Would it be collectible if it had been sold to another party?—G. W., Kiowa County, Colo.

The note is good. In the hands of an innocent purchaser, you would have no defense. However, no attempt may be made to collect the note and until such an attempt is made you have no cause to worry.—Hamlet J. Barry, Equitable Bldg., Denver.

Attachment Suit for Wages.

Being unable to collect wages for breaking twenty acres of sod, can I hold the barley grown on this twenty acres and forty acres adjoining in order to obtain my pay?—G. E. C., Adams County, Colo.

Bring an attachment suit against the party and attach the barley.—Hamlet J. Barry, Equitable Bldg., Denver.

Closing Section Line Roads.

Is it required that gates be maintained on section four corners? Can they shut a man in by closing gate? Gates have been closed against me so I have to go out of my way two miles.—B. E. T., Elbert county, Colo.

If this is a regularly laid out section line road I do not see how anyone can legally close it to travel. Take the matter up with the county attorney of your county. He should be able to give you definite information as to your rights in the matter.—G. C. W.

State Fair Premium Lists.

Advance sheets for every department of the Colorado State Fair premium list are now ready for distribution.

Don't be backward in applying to Manager Beaman for such of the department lists as you may be interested in, for while he is mailing as fully as possible to those whom he believes will want them, you may be overlooked for the reason that the fair mailing lists were destroyed at the time of the Grand Opera house fire.

Dairying and Hog Raising

All letters regarding commercial and technical features of dairy farming and hog production promptly answered. Address all communications to Dairy Department, Western Farm Life, Denver, Colorado.

Milk is without doubt our most important foodstuff, because the composition of milk is such that when used in combination with other foods of either animal or vegetable origin, it corrects their dietary deficiencies.—Dr. E. V. McCollum.

Don't weigh your milk, for then you might have to figure and think.

Feed the cows timothy hay—it is good for race horses.

Cow-testing associations are needless—they show how to save and know.

Keep the barn hot—cows are like woodchucks.

Don't have too many windows in the barn—the hired man might look out.

Keep water ice cold—shivering gives cows exercise.

Avoid heavy milkers—they consume too much valuable time.—Tennessee Extension News.

The Perfect Dairy Cow.

At attempt was made at the National Holstein convention in Kansas City to visualize on canvas and in clay model the perfect Holstein cow. A sculptor, Gozo Kawamura, and a painter, S. Edwin Megargee, both of New York City, had been employed in the effort to unite on a type in which all judges of Holstein cattle can agree. The artists were supplied with numerous photographs by members of the committee in charge. With the committee they also visited one of the leading Holstein farms in Wisconsin, where measurements were taken and various studies in type worked out. The 12-inch model and the 10-foot canvas painting as completed at Kansas City while breeders critically looked on will represent a composite of what the leading Holstein men of the country consider the perfect Holstein.

Big Crowd on Hog Day Tour.

More than 1,500 persons attended the "Hog Day" demonstration and tour in western El Paso county last month. This event marked the beginning of the farm bureau five-year campaign for more and better hogs in the Pike's Peak region. Among the most enthusiastic of those in attendance were the club members from the various pig clubs of the county, in which are enrolled 150 boys and girls, each the owner of either a purebred gilt or a sow and litter. Among the farms visited were the J. W. Brauer, Purebred Duroc Company Ranch, in which Governor Shoup is interested, the Banning Ranch, owned by R. W. Lewis; the R. I. Love ranch and Stratton Home Farms. As a feature of the program, County Agent J. C. Hale staged a demonstration showing the way in which improvement in type had been brought about. It was pointed out that with an abundance of alfalfa in one section and corn in another, El Paso county could greatly enlarge its pork production with mutual benefit to the whole county.

Colorado Holstein Winnings.

Colorado Holstein herds won special prize money from the Holstein Friesian Association of America for the fiscal year 1921 and 1922, amounting to $174.45. The first prize Colorado herd was that of Mrs. R. G. Douglas of Rush, Colo. This herd had the following individual winnings: First junior two-year-old in the 305-day class with a total butter production of 764 pounds, $25; and the same cow, second, in the 305-day milk production with a record of 18,444 pounds, $22; fifth place in the junior three-year-old 365-day record with a production of 1,038 pounds of butter, $15; ninth place with the same cow for the 365-day milk record on a production of 21,428 pounds, $8; fifth place in the 365-day milk record for cows four and one-half years old with a production of 25,208 pounds; twenty-fifth place on the same cow for 365-day butter record with a production of 878 pounds; thirty-seventh place in the five-year-old class of 7-day butter records with a production of 32.8 pounds, $16.

The second prize herd was that of D. G. Foster, Englewood, his winnings being as follows: Fifth place in the four-year-old class for 7-day milk production, 700.4 pounds, $16.20; ninth place, with a cow four and one-half years old on a 30-day butter production of 124 pounds, $8; fourteenth place, on a four-year-old, 7-day butter record of 30.7 pounds, $14; twenty-sixth place, on a four and a half year old cow with a 7-day butter record of 30.03 pounds, $8.

The third herd was a tie between the Colorado State Home, Denver, and the Pahgre Valley Ranch, Montrose, each herd having winnings to its credit totaling $18.50.

The fourth prize herd was that of Spencer Penrose of Colorado Springs. His winnings were fifteenth place on a four-year-old 365-day butter record amounting to 883 pounds, $8.25; and twenty-sixth, on the same cow with a 7-day butter record of 29.8 pounds, $8.

B. F. Simpson of Denver won fifth place with one six-year-old cow inside the money, winning $7.50 on a 7-day butter record of 31.8 pounds.

Being listed with the prize winners of the year is one of the much sought for honors and the Colorado breeders may well be proud of the recognition they have received from the national association.

Balanced Rations Paid Well.

Heavy losses in spring litters were quite generally reported all over the country. It was believed by many experienced hog men that improper feeding of the brood sows was responsible for many of these losses. This view seems to be borne out by definite information obtained from spring farrowing records on fifty-three Kansas farms. A study of these records shows that the sows fed balanced rations under good management weaned 71 per cent more pigs than the sows on low protein rations, and 50 per cent more than sows on good rations but under poor management.

All the sows on which records were kept were fed corn. On twenty-nine of the farms 263 sows received corn and a protein supplement of either tankage, skim milk, alfalfa, or linseed oil meal. They had range and fair equipment. The 263 sows farrowed 2,669 pigs—an average of 10.1 to the litter. Seventeen hundred thirteen of these pigs, or 64 per cent, were weaned—an average of 6.5 pigs per litter.

On 11 farms 166 sows received mostly a corn ration. They farrowed 1,194 pigs—7-2 to the litter, and weaned 645 of them, or 3.8 pigs to the litter.

One hundred forty-five other sows on thirteen farms received a balanced ration, but on account of poor equipment, bad weather, scanty preparations before farrowing, and poor care, they weaned but 646 pigs out of 1,397 farrowed, or 45 per cent. These sows farrowed an average of 9.7 pigs and saved 4.4 pigs to the litter.

The farrowing records were kept by farmers over the state as a part of the "Save the Pig" campaign put on through C. G. Elling, extension specialist in animal husbandry.

LIVESTOCK NOTES.

Great Orion Sensation Again heads the herd of Durocs owned by the Range View Farm, Henderson, Colo. He is the son of Great Orion Sensation, 15 months old, weighs 150 pounds, is the sire of a fine bunch of 80 spring pigs. He was junior boar at the National Western Stock Show, 1922. The Range View farm will show their herd of Durocs this fall at the fairs at Brighton, Rocky Ford and Pueblo.

Fliegle Brothers will hold a public sale at their farm, 1½ miles south of Fairmount Cemetery, Denver, Tuesday, September 5. They will offer at public auction 250 Holstein and Jersey dairy cows as well as their 40 -acre dairy farm and equipment.

Colorado Fair Dates.

Adams County Fair—Brighton, Sept. 13-16, Geo. R. Smith, Sec.
Arkansas Valley Fair—Rocky Ford, Sept. 5-8, J. L. Miller, Sec.
Baca County Fair—Springfield, Sept. 13-16, S. M. Konkle, Sec.
Boulder County Fair—Longmont, Sept. 5-8, Harry E. Niven, Sec.
COLORADO STATE FAIR—Pueblo, Sept. 25-30, J. L. Beaman, Manager.
Conejos County Fair—Manassa, Sept. 14-16, G. Wayne Rogers, Sec.
Delta County Fair—Hotchkiss, Sept. 12-15, A. N. Minton, Sec.
Douglass County Fair—Castle Rock, Oct. 3-6, R. H. Miller, Sec.
Elbert County Fair—Keysor, Sept. 14-16, A. W. Moody, Sec.
El Paso County Fair—Calhan, Sept. 21-23, Bert McCormick, Sec.
Huerfano County Fair — Walsenburg, Sept. 20-23, Chas. O. Unfug, Sec.
Intermountain Fair and Stock Show—Grand Junction, Sept. 5-8, W. M. Wood, Sec.
Kit Carson County Fair—Burlington, Oct. 3-6, H. G. Hoskins, Sec.
Kiowa County Fair—Eads, Sept. 20-21, J. C. Miller, Sec.
Larimer County Fair—Loveland, Aug. 29-Sept. 1, Jos. Hayes, Sec.
Lincoln County Fair—Hugo, Sept. 21-23.
LaPlata County Fair—Durango, Sept. 12-15, Wm. T. Burris, Sec.
Logan County Fair—Sterling, Sept. 12-15, C. J. Funk, Manager.
Pueblo County Fair—Goodpasture, Sept. 21-22, Fred Lytle, Sec.
Phillips County Fair—Holyoke, Sept. 5-8, F. E. Brolliar, Sec.
Rio Grande County Fair—Del Norte, Sept. 20-22.
Routt County Fair—Hayden, C. A. Stoddard, Sec.
Trinidad-Las Animas County Fair—Trinidad, Sept. 19-22, Chas. Bailey, Sec.
Washington County Fair—Akron, Sept. 6-8, Joe K. Powelson, Sec.
Western Slope Fair—Montrose, Sept. 19-22, W. H. Asbury, Sec.
Weld County Fair—Greeley, Sept. 12-15. C. W. Crozier, Sec.

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Repeatedly we are told by veteran Goodyear users that our tires today give more than twice the mileage they did twelve years ago.

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Take our 30 x 3½-inch Cross-Rib fabric clincher as an example.

In 1910 you paid for this size tire $33.90; today, for a vastly improved tire of the same size, you pay but $10.95!

All other tires in the Goodyear line show similarly important reductions, the average decrease in price since 1910 being more than 60 per cent.

Goodyear Tires this season are at their highest point of excellence—larger, heavier and more durable than ever before.

Goodyear prices are now at the lowest point in Goodyear history.

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HOGS eat better when a little MERRY WAR LYE is mixed with their feed—and you know it takes appetite to make meat and fat. MERRY WAR LYE also tends to reduce acidity of feed—helps build up the resistance of hogs to certain diseases and helps tone them up. Thin, scrawny, sickly hogs usually improve quickly when fed MERRY WAR POWDERED LYE—even healthy hogs do better. Costs little to feed—120 feeds in every can—pays for itself many times over.

Directions For Feeding

Thoroughly dissolve a tablespoonful of MERRY WAR POWDERED LYE in a little water and mix well with feed for ten hogs or thoroughly dissolve HALF a can in water and mix with a barrel of feed. Stir well and feed night and morning. If on dry rations thoroughly dissolve HALF a can of MERRY WAR LYE in each barrel of drinking water. Follow directions carefully.

For years hog raisers have been feeding MERRY WAR LYE—they know what it will do. Profit by their experience—feed your hogs MERRY WAR LYE.

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Questions about the farm flock promptly answered by letter. Free advice on all phases of poultry production. Address all inquiries to Poultry Department, Western Farm Life, Denver, Colorado.

Selling off the surplus cockerels early in the season will, among other things, give the pullets more room.

Uniformity throughout the community in the type of poultry raised means better prices for eggs.

Mineral Matter for Poultry.

It is always essential that poultry be supplied with plenty of mineral material. One way of using heavy bones of various kinds is to bake them until they are brittle and then pound them into small crumbs. Ground green bone is an excellent source of mineral matter but it is not always possible to have it perfectly fresh.

Controlling Fowl Cholera.

Cholera is one of the serious diseases affecting poultry. It is highly infectious and few fowls recover. Among the symptoms are profuse diarrhea, high temperatures and drying up of the combs and wattles. In the post-mortem examinations most of the fowls will be found to have enlarged livers and the mouths are usually filled with mucus. Fowls quite often die on the nests or drop dead on the roost.

The poultry department of the Colorado Agricultural College has recently been notified of an outbreak of cholera in the plains section of the state. Paul C. Jamieson, poultry extension specialist, is urging that every effort be made to check this disease wherever it may have appeared. He advises the immediate isolation of all fowls affected and the burning of those dying. The premises should be thoroughly disinfected with a 5 per cent solution of carbolic acid. He also advises that epsom salts be given in bran mash at the rate of one teaspoonful to the fowl. Also use potassium permanganate in the drinking water, enough to make it light red in color.

Hens Have Apoplexy.

A reader who fails to sign her name tates that she is losing a number of hens from an apparently healthy flock. They get a little droopy, their combs turn purple and in the morning they will be dead on the roost.

We have many times stated that unsigned questions cannot be answered, but will make an exception in this case. W. E. Vaplon, our Poultry Department editor, states that he is of the opinion that these losses are the result of overfeeding and lack of exercise. The disease is a sort of apoplexy, a bursting blood vessel in the brain causing death of the fowl. It occurs especially in over-fat laying hens. Gorging food or becoming over-heated may bring on an attack. The remedy is to use less fatty feeds and force more exercise by scattering the grain in deep straw.

Culling Improves Progeny.

Making the flock more profitable during the coming winter is the thought given most prominence in culling out the loafers. Poultrymen are justified in getting rid of the low producers for this reason alone, but systematic culling pays even more in the improvement of the flock from year to year. A convincing demonstration of the improvement that may be obtained in this way was made at the United States Experiment Farm, Beltsville, Maryland, in recent investigations. The late moulters, selected from a flock of 100 Rhode Island Reds in the fall of 1920, laid several more eggs per bird during their second year than the original flock as pullets. They were used as breeders the following spring, and the first Red pullets to begin laying in the fall of 1921 were found to be the offspring of these late-moulting hens. Their pullets, in a period of seven months, have already averaged about two dozen eggs per bird more than the original flock. The value of their product would be about $1.04 per bird more than the value of the eggs from the original flock during the same time. It is probable that this large margin will be increased even more in the next five months. In the original flock the bulk of the production was in March and April.

The wise poultryman will lose no time in culling out these poor producers of cheap eggs. He will start this summer building the foundation for a flock of long-distance layers. The birds can be selected now and next spring, after a short rest in the winter, their eggs will produce a high percentage of strong, healthy chicks, that are almost certain to make better records in flock production. If good sires are selected the improvement will be surprisingly rapid.

Kerosene Emulsion Recipe.

Kerosene, either alone or in the form of emulsion, is one of the most commonly used remedies to control mites in the poultry house. It can readily be converted into a disinfecting agency by following a formula recommended by the United States Department of Agriculture.

The emulsion is made by shaving one-half pound laundry soap into one-half gallon soft water. Boil the mixture until soap is dissolved and then, after removing it to a safe distance from the fire, stir into it, while hot, two gallons of kerosene. This makes the stock mixture. When it is to be used as a mite killer, one part of the emulsion is mixed with ten quarts of water. When it is to be used as a disinfectant, stir well and add two pints of crude carbolic acid or crude cresol.

The compound solution of cresol is one of the best disinfectants that can be purchased ready to use. It contains 50 per cent of cresol, and a pint of it in ten quarts water makes the right solution to apply to houses or spray over the ground. A 5 per cent solution of carbolic acid—one pint carbolic acid, ten quarts water—is about equally efficacious.

Turkeys May Have Roup.

We are having trouble with our young turkeys. They first get droopy and begin to snuffle, their heads swell so that one or both eyes are closed. We feed them principally wheat, wheat bran and cottage cheese. They have free range, some with turkey mothers and some with hens. I have tried treating them by dipping their heads into a solution of potassium permanganate and have used a mixture of sulphur and lard on their heads.—Mrs. W. J. R., Wyoming.

From the symptoms, I am quite sure that the turkeys are affected with roup. In most cases it is advisable to kill any fowls having infectious disease because of the danger of spreading the disease to the rest of the flock. In treating the young turkeys affected, first isolate them from the rest of the flock. Wash their mouths and nostrils with a solution of potassium permanganate, open the swellings under their eyes and squeeze out the matter, after which the cavities should be washed with an antiseptic and painted with iodine. This is the treatment recommended by the United States Department of Agriculture in Farmers' Bulletin 791.—P. C. Jamieson.

Colorado Holstein Breeders Hold Annual Picnic.

(Continued from Page 3.)

work of tuberculosis eradication and breeders of the state will lose far more than the cost of an aggressive campaign if this situation is allowed to continue. Mr. Lauderback's appeal for action on this vital matter met with the hearty approval of those present.

Association Adopts New Constitution.

Following the various addresses and the discussions the committee appointed to redraft the constitution of the organization was called on for its report, which was made by Mr. Ponsford, the chairman. As a result of changes made in the constitution of the Holstein Friesian Association of America, and new lines of activity taken up by this national organization with which the state associations are affiliated, it was necessary to draft an entirely new constitution. The committee had carefully covered the ground and the new constitution for the association was adopted as a whole as read. The Holstein Friesian Association of Colorado is the official name of the organization according to this new constitution. Plans were discussed for organizing by counties and districts, this having proved to be a most successful method of developing and promoting increased interest in the breed in the various localities and linking them up with the state organization. Before adjournment the breeders present formally went on record as favoring the passage of the Voight "filled milk" bill, and instructed the officers to convey to the Senators and Representatives in Congress this action of the organization.

Among the breeders present were W. S. Partridge of Holly, president of the organization, who made the opening address and presided through the program; Mr. Leonard, manager of Model Dairy Farm of Holly; Mr. and Mrs. Spencer Penrose; Mr. and Mrs. R. G. Douglas of Rush; Mr. and Mrs. Chas. Wilson of the Turkey Creek Farm of Mr. Penrose; Allyn Tedman, county agent of Douglas county; Norman D'Arcy of the Divide section; Mrs. Stors Hall of Denver, and others from various parts of the state. This gathering of breeders of Holstein cattle aroused the enthusiasm of those in attendance and will have a wholesome effect in bringing about aggressive action to promote the cause of the Black and Whites and also the cause of the dairy industry as a whole.

Lice Kill Chickens In Warm Weather

Summer Months Most Dangerous, Says Poultry Authority — To Prevent Losses Add Minerals to The Fowls' Drinking Water.

If your chickens are sickly, won't lay and are dying off in hot weather, lice and mites are probably the cause. Dr. B. F. Kaupp, famous poultry authority, says: "Lice are most common in July and August. During these months conditions are more favorable for their propagation." To easily get rid of these pests and prevent losses, add minerals to the fowls' drinking water. This does away with greasing, dusting, spraying and dipping. Soon after the fowls drink the mineralized water all lice and mites leave them.

The necessary minerals can now be obtained in convenient tablets, known as Paratabs. They are scientifically prepared, perfectly safe, and dissolve readily. The tablets also act as a tonic conditioner and are warranted to impart no odor or flavor to eggs or meat. They are equally beneficial to young chicks and grown fowls. The health of the fowls improves, they grow faster, stand hot weather better, and the egg yield frequently is doubled. Mrs. M. N., Pulaski, Ky., says: "I am giving Paratab water to my chickens and am having better luck this year than ever before."

Any reader of this paper may try Paratabs without risk. They cost only a trifle and are sold under an absolute guarantee. Furthermore, the laboratories producing Paratabs are so confident of good results that to introduce them, they offer two big $1 packages for only $1. Send no money, just your name and address to the Paratab Laboratories, Dept. 895, 1100 Coca Cola Building, Kansas City, Mo., and the two $1 packages, enough for 100 gallons of water, will be mailed. On delivery pay the postman only $1 and postage. If not delighted with the results in 10 days, notify the laboratories and your money will be refunded in full. Don't hesitate to accept this test offer, as it is fully guaranteed.

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CATTLE AUCTION—250 DAIRY COWS, TUESday, September 5, 1½ miles south Fairmount Cemetery, Denver, Colo. Holsteins and Jerseys, two registered Jersey bulls, one junior champion Denver Show, 1922; farm and equipment goes. Floegle Bros., owners. Buchanan & Henry, Auctioneers, 1927 Broadway, Denver.

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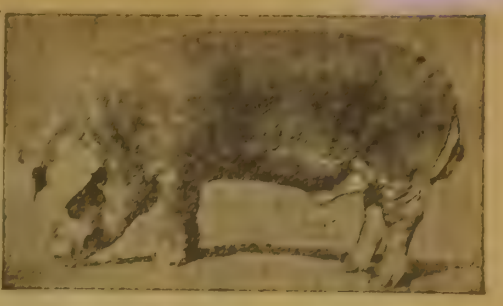

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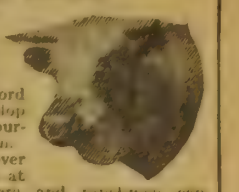

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This food information may influence your child's health

IN the nursery we have long recognized the magic of mother love. Now we are fast learning how much the kitchen, too, calls for a mother's heart and watchful care.

In one of our prosperous suburban communities the Board of Education recently reported in part: "One-third of our pupils are under-nourished. Children are too often entirely dependent upon servants for their food."

Think of it! Wealthy children under-nourished! With food a-plenty, insufficient thought was given to its selection and making.

Fortunately, however, most intelligent mothers know that their home kitchens can mold, for good or for ill, the very lives of their boys and girls.

They know, for example, that a certain amount of fat, in foods, is essential to human health and strength. The wise mother assures herself that the fat employed in baking and frying foods for her children is one which readily digests.

When she uses Crisco, she knows that she follows a safe course, for her little ones and for the older members of her family as well. For Crisco, a pure fat of vegetable origin, provides both easy digestion and delicious, natural-flavored foods.

Women are often kind enough to tell us that their reputation as fine cooks is based largely on their Crisco foods. Light, tender cakes; flaky pie crusts; fried foods whose quickly-formed brown crust prevents fat absorption.

Few thoughtful mothers once they are familiar with Crisco's fine digestibility, will hesitate to invest, each week, a few added cents for health's sake.

Crisco is sold by grocers in small, medium sized and large cans. Made and sold in Canada, too.

EMILY'S WHITE CAKE

½ cupful Crisco
1½ cupfuls sugar
3 cupfuls flour
3 teaspoonfuls baking powder
1 teaspoonful salt
1 cupful water
1 teaspoonful flavoring
whites of 3 eggs

Cream Crisco. Add sugar slowly and cream together. Sift dry ingredients, and add alternately with the liquid. Add flavoring, beat mixture thoroughly and last fold in stiffly beaten whites of eggs. Pour in cake mixture; put in moderate oven, allow to rise for five minutes, increase heat to bake; at the end of fifteen minutes reduce heat to allow cake to shrink from the pan. Entire time for baking twenty minutes.—*Kate B. Vaughn.*

Send for "The Whys of Cooking," the most helpful cook book you ever used. Mail 25c to Section U-8, Department of Home Economics, The Procter & Gamble Co., Cincinnati, Ohio.

Two Simple Home Tests!

Low Melting Point. Easy Digestibility.

Into half a glass of lukewarm water drop a small lump each of Crisco and any other fat. With a teaspoon gradually add hot water until Crisco melts. You will find that few other fats melt at this point. Food authorities say that an easily digested fat should melt near body heat—98⅘ degrees. Crisco, you will find, melts even below this temperature. It melts at 97 degrees. (This test does not necessarily condemn the digestibility of the other fat, but it will aid you to establish Crisco's fine digestibility.)

Avoid smoke and Odor!

Put into separate pans equal amounts of Crisco and any other fat. Heat slowly for eight minutes, or until they reach a temperature where a bread crumb browns in 40 seconds.

Notice that the Crisco, unlike most cooking fats, does not smoke at this proper frying temperature.

You will find that frying with Crisco will be very helpful in keeping your whole house fresh and free from the odor of cooking fats.

Digestible [VEGETABLE] *Shortening*

For delicious cakes which stay fresh longer
For flaky and digestible pastry
For wholesome digestible fried foods.

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Keep the Manure Spreader Busy on Livestock Farm—Page 4

WESTERN Farm Life

UNIVERSITY OF
SEP 15

Vol. XXIV. *Denver, Colo., September 1, 1922.* *Semi-Monthly*

Good roads are coming— *but* you can have Hasslers *now!*

SOME day, the statesmen say, all our roads will be perfect! But why wait? You can have Hasslers *now* and escape most of the troubles bad roads cause.

Even the so-called "good" roads of today are seldom perfect throughout. There are invariably old worn stretches that make Hasslers a vital necessity for comfort and economy.

Hasslers smooth out the bumps, reduce vibration, minimize breakage, save repairs, and slacken deterioration of your Ford or Dodge Brothers car.

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U. S. Grain Growers Reorganize.

Complete reorganization of the U. S. Grain Growers, Inc., has taken place and it is now wholly under control of the American Farm Bureau Federation. Thea reorganization plans were worked out by a creditors' committee consisting of E. H. Cunningham, secretary of the Iowa Farm Bureau; J. W. Coverdale, secretary of the American Farm Bureau Federation, and W. S. Hill, president of the South Dakota Farm Bureau. This committee was appointed at the May 13 meeting of the Middle West farm bureau presidents to untangle the affairs of the U. S. Grain Growers. C. H. Gustafson, president, Frank Myers, secretary, and the whole board of directors elected at the March meeting of the U. S. Grain Growers resigned in order to give the committee a free hand in working out its plans. Under the reorganization effected, the state farm bureau presidents of nine of the farm bureau states become directors of the grain marketing organization. The new officers are as follows: Howard Leonard, Eureka, Ill., president of the Illinois Agricultural Association; John F. Boland, Webster Grove, Mo., president of the Missouri Farm Bureau Federation; Ralph Snyder, Oskaloosa, Kan., president of the Kansas Farm Bureau Federation; John G. Brown, Monon, Ind., president of the Indiana Federation of Farmers' Associations; Chas. W. Hunt, Des Moines, Ia., president of the Iowa Farm Bureau Federation; O. E. Bradfute, Xenia, O., president of the Ohio Farm Bureau Federation; J. F. Reed, St. Paul, Minn., president of the Minnesota Farm Bureau Federation; George McKerrow, Pewaukee, Wis., president of the Wisconsin Farm Bureau Federation; E. H. Cunningham, Cresco, Iowa, secretary of the Iowa Farm Bureau Federation; R. A. Cowles, Bloomington, Ill.; W. R. Crowther, Golden City, Mo.; T. I. Ferris, Pleasant Lake, Ind.; H. L. Keefe, Walthill, Neb.; A. J. McInnis, Dazey, N. D.; Chas. B. Stewart, Red Cloud, Neb.; Eugene Funk, Funks Grove, Ill.; Herman Danforth, Washington, Ill.; B. F. Parmenter, Lincoln, Neb.; A. G. Burgeson, Douglas, N. D.

Two places on the board of directors are vacant and will be filled later. Of the new board of directors, Cowles, Crowther, Ferris, Keefe, McInnis, Steward and Burgeson were members of the retiring board.

The new board of directors elected officers as follows:

President—E. H. Cunningham.
Vice President—H. L. Keefe.
Secretary—J. M. Mehl.
Treasurer—Chas. E. Gunnels.

Secretary Mehl has been assistant to the president of the U. S. Grain Growers, Inc., since its incorporation. Mr. Gunnels is treasurer of the American Farm Bureau Federation and is instructed by that organization to serve the Grain Growers without pay. Secretary Mehl receives a salary of $5,000 a year. No other officer and no director of the U. S. Grain Growers, Inc., receives any salary. Per diem compensation for the directors was fixed at $10.

The new board of directors elected an executive committee of three—E. H. Cunningham, R. A. Cowles and J. F. Reed—and vested in it broad powers for carrying on the affairs of the organization. The subsidiary U. S. Grain Growers' Sales Company is controlled by this executive committee.

An advisory committee of three was appointed to advise on questions of finance and marketing. The members of this committee are: Bernard M. Baruch, financier, New York; Alexander Legge, president of International Harvester Company, Chicago; Frank O. Wetmore, president of First National Bank, Chicago. All three have accepted appointment on this committee.

Secretary of Agriculture Henry C. Wallace and Secretary of Commerce Herbert Hoover were invited to serve as ex-officio members of the new board of directors, representing the public.

The auditor's report on the financial affairs of the U. S. Grain Growers, Inc., on July 26, 1922, showed the total liabilities to be $394,582.75. Assets totaling $109,316.48 were reported, leaving a net deficit of $285,267.27.

In resigning the old officers frankly admitted that the Chicago Board of Trade had effectively blocked their plan to have G. W. Hales, a wealthy Chicago grain dealer, handle the organization's grain through the grain exchange. Owing to the financial status of the organization they had nothing further to offer. The new officers assert their purpose of getting the U. S. Grain Growers going according to the original plan of the Committee of Seventeen.

Don't fail to get our big new Fall Catalog showing hundreds of the most wonderful values you ever saw. IT'S FREE. Our enormous purchases right from the Manufacturers at new low costs and our selling plan direct by mail saves you the middlemen's profits and gives you better merchandise for less money. Quick shipping service—safe delivery guaranteed. You can have just what you want and get it promptly—Clothing, Dry Goods, Shoes, Supplies for the Farm and Home—*everything* priced at a saving for you. Our Catalog is your best guide. Just send your name and address. *Satisfaction positively guaranteed on every purchase.*

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Western Farm Life

A Western Magazine for Western Farmers and Stockmen

VOL. XXIV. DENVER, COLORADO, SEPTEMBER 1, 1922. No. 17.

Electricity Once Used Becomes Almost a Necessity

WHITE COAL A PRACTICAL SOURCE OF LIGHT AND POWER ON FARM

J. Howard Blake.

LIGHT and power are as essential on the successful farm as hard work and good seed. If any farmer doubts that, let him forsake his power plant and go back to the days of hand milking, when all of the barn work was done by the aid of lanterns swinging hazardously from the ceiling rafters. He will soon be convinced and his conviction will be shared equally with his wife, who would be just as unwilling to revert to the dark kitchen, the hand churn and all of the numerous household appliances that now start by the touch of a button.

It has been largely this relief from numerous and laborious operations that has established white coal on the farm so universally and rapidly. But out of the total number of farmers who have invested in power plants of one kind or another during the past few years there are a few who are dissatisfied with the return on their investment and blame the equipment for much that is really their own fault. Too many have made their investment under the false impression that "a lighting system" was all ordered. No previous plan, including the primary essential of required power was made, or if so, it was that they wanted. In most cases, that was what they left too much in the hands of an agent or salesman whose first interest was to sell some particular type of equipment.

With light and power at the touch of a button, the farm home has been transformed.

Buy Plant of Ample Capacity.

There are still other homes in all parts of the country where economy was too much of a factor when the lighting equipment was bought. When the salesman was at the farm, the only thought was lighting, and the power requirement was figured on the basis of so many lights in so many buildings, with possibly enough surplus to run the pump back in the shed for water supply. After it was installed a hundred and one uses for white coal appeared and the equipment was overloaded, resulting either in serious damage to the generator or batteries, or to the temper and disposition of the farmer.

In such cases, instead of blaming the system, the farmer ought, really, to blame himself for not having made proper estimate of the capacity of the system needed before ordering.

Experience gleaned from a large number of farms has taught the wisdom of installing equipment large enough to take care of any reasonable demand that might be put upon it. To tax it beyond its theoretical limit will result in damage nine times out of ten and then the repair bills will more than equal the original expense of installing a larger system.

Figuring Requirements in Advance.

Lights, of course, are one of the primary uses of white coal on the farm. Next, comes the heavier power such as the operation of water systems and then, in order, comes a long list of accessories some of which are now considered essential and others are still in the luxury class.

Based on the average load for the months of October to April, when lights are needed, the requirements might be figured out as follows: For residence lights four hours a day using 600 watts of current an hour, 2,400 watt hours; for barn lights, three hours daily, using 1,500 watts an hour, 4,500 watt hours; for water system operated five hours a day, using 256 watts an hour, 1,250 watt hours; a total of 9,150 watt hours or almost 10 kilowatt hours. A kilowat—usually abbreviated K. W.—is 1,000 watts. This means that the energy required for the above uses will amount to approximately 10 K. W. hours a day.

To this must be added the following equipment which is usually desired on most farms: A washing machine used five hours a week, requiring 1,250 watt hours; an electric iron used ten hours a week, 6,000 watt hours; a vacuum cleaner used four hours a week, 512 watt hours, or an additional requirement of more than 7 K. W. hours a day, which is usually overlooked when original plans for a lighting system are made.

Some complaint has also been brought against lighting systems because of trouble with the storage batteries. In most of these cases the trouble has been the almost inevitable result of ignorance on the part of the farmer in giving his batteries the proper care.

Battery Important Part of System.

While it is true that batteries have been developed during the last few years to a remarkable degree of efficiency it does not follow that they are fool proof or that they will run along indefinitely without attention. There are all sorts of conditions that can wreck the best battery made in a comparatively short time. Grossly overcharging them is one; letting them run along without water is another. And it would pay any farmer to spend what time is needed in studying the operations and requirements of his batteries before actually operating his system.

Proximity of the batteries to the power plant is of much less importance than having them placed where the temperature variations are within the proper range. A battery should be neither too hot nor too cold. If placed in a frame shed which is unheated they cannot do their best work, especially in winter when the temperature will probably get much below freezing at frequent intervals. The cellar of the average house is usually as good a place as any for the batteries, it being cold enough there and yet not often below freezing.

Under-size Battery Poor Economy.

As to type and cell size, many farmers have been lead into trouble by unscrupulous salesmen whose first interest is to sell their own particular type. Opinions of experts differ as to actual requirements, but it is of interest here to note findings recently made in the Westinghouse Union Battery Company's laboratories. They found that, as a rule, increasing the cell size increases the convenience to the owner and prolongs the life of the battery to an amount which warrants the higher cost. With a larger battery, danger of injury through overcharging is lessened, the load on the battery is more easily carried and the engine and generator operated less frequently.

Since most farm power requirements are measured in terms of horse-power, it is necessary to know how to translate horse-power into watts and lightage. A one-eighth H. P. motor corresponds to 93 watts or four 25-watt lamps; a one-fourth H. P. motor, 185 watts or seven 25-watt lamps; a half H. P. motor, 375 watts or fifteen 25-watt lamps; a three-quarter H. P. motor, 559 watts or twenty-two 25-watt lamps, and a one H. P. motor, 765 watts or thirty 25-watt lamps.

From this it may be seen that a one-half horse-power motor draws from the battery 373 watts or the same power as do fifteen 25-watt lamps. With small batteries it is unsafe to operate any motor of over one-quarter H. P., or an appliance of over 186 watts unless the engine and generator are running. This is especially true in overloading, for it is possible to tax a motor or an appliance so that it uses many more watts than is indicated on the name plates.

A little care in installing systems with particular attention to the kind and type of battery used, being careful to avoid the cheaper makes which, even under the most favorable conditions hardly justify their [illegible] will overcome most of the objections brought against power on t[illegible]

Tests to Improve Grazing Lands

COLORADO EXPERIMENT STATION WORKING OUT SYSTEM TO PROTECT CATTLE RANGES.

ABUNDANCE of grass and forage plants will ever be the basis of profitable livestock production which has been one of the main sources of wealth in the western states. Without good range the industry cannot continue to be profitable. Except in those districts which come under the jurisdiction of the Forest Service there has been, up to the present time, a gradual deterioration of the western grazing grounds.

Vast areas of state and public domain lands in Colorado are nearly bare, while the scant vegetation found on them is largely made up of useless or harmful weeds.

"Must Be Protected."

"These lands must be protected," says E. L. Maynard of the Colorado Agricultural College. "Systems of management must be used in grazing them or they will become useless and the livestock industry will suffer accordingly.

"The work done by the Forest Service in increasing production on the Forest Reserves vividly illustrates what can and must be done on these lower ranges.

"In order to get actual figures on the value of 'early protection' and 'rotational grazing' in building up lowlying range land, the Colorado Experiment Station is conducting an extensive test in the foothill range near Fort Collins. This land at an average altitude of 5,300 feet is typical of the lowlying range throughout the state.

Three Different Tests.

"The land has been fenced into three separate sections. One of these sections is a 'check' where cattle are pastured each year from the earliest appearance of plant growth in the spring.

"Forage plants on the second section are given 'early protection' each year. They are allowed to get a good start before the cattle are turned on.

"The third pasture is divided into two parts on which the cattle are rotated. They start on one section in the spring, allowing the other section to reseed after which they are put on the second section for fall grazing. This same procedure is followed the second year to give the seedling plants in the second section a chance to get well started. The third year the rotating is reversed, the cattle being started on the second section.

"The cattle on test are weighed each month and the weights of cattle together with condition of the pasture will show the comparative value of the systems.

"It is planned to run a new set of steers on this range each summer for the next four years."

Weight as a Factor in Market Value of Livestock

GENERAL DEMAND IS FOR LIGHTER CUTS IN ALL CLASSES OF MEAT

Gilbert Gusler.

A former speaker of the House of Representatives, himself rather ponderous, once declared that "no gentleman ever weighs more than two hundred pounds."

In determining values in the livestock market, weight varies in importance from the inconsequential to a factor at times transcending even quality and finish.

For a century the drift of market preference has been toward lighter and lighter cattle, hogs and sheep. The tallowy mountains which formerly constituted the standard of perfection in beef production have been superceded by the tidy yearling. The lardy leviathans which walked to market in the days when Cincinnati, then the chief packing center, was known as "Porkopolis," have given way to the "regulation lights" weighing 170 to 190 pounds. Fashion likewise has turned from the heavy wether to the 80-pound lamb.

Small Carcass Less Wasteful.

The smaller carcass is less wasteful both for the retailers and the consumer, and the smaller sized retail cuts are a better fit for the purse and for the average family size of the present day. Being from younger animals as a rule than the heavier carcass, all parts are comparatively tender. From the producer's standpoint, there is economy also in production for sale at a younger age, but such a factor does not induce the market to pay a higher price.

Limited Demand for Heavy Weights.

While the general rule is that lighter weights have the preference, there are exceptions, and the amount of the discount, if any, on heavyweights varies greatly at different times. While the rank and file of consumers want the cuts from lighter carcasses, the hotel, restaurant, dining car and steamboat trade require a more or less constant supply of heavy beef. Likewise a few heavy wethers can be sold. These outlets are easily glutted, however, and if a few too many arrive they must be sold at a sacrifice. On the other hand, since this trade is rather fastidious, scarcity will place such animals at a premium.

Heavy steers, which means those weighing 1,350 pounds or more, generally are in their heydey during the late summer and fall months. Such cattle can only be produced by a long period on feed. Feeders must be purchased during the fall or early winter and fed a full grain ration for five or six months. When the busy season on farms arrives along with hot weather and fly time, during which cattle do not gain well, most feeders order cars. Only a few are carried beyond this period so that they can virtually command their own price. For the same reason fat yearlings also are apt to be scarce at that season, so that the actual premium on weighty steers over yearlings is not apt to exceed 50 cents per hundred pounds at the outside.

Heavy Steers Marketed in Spring.

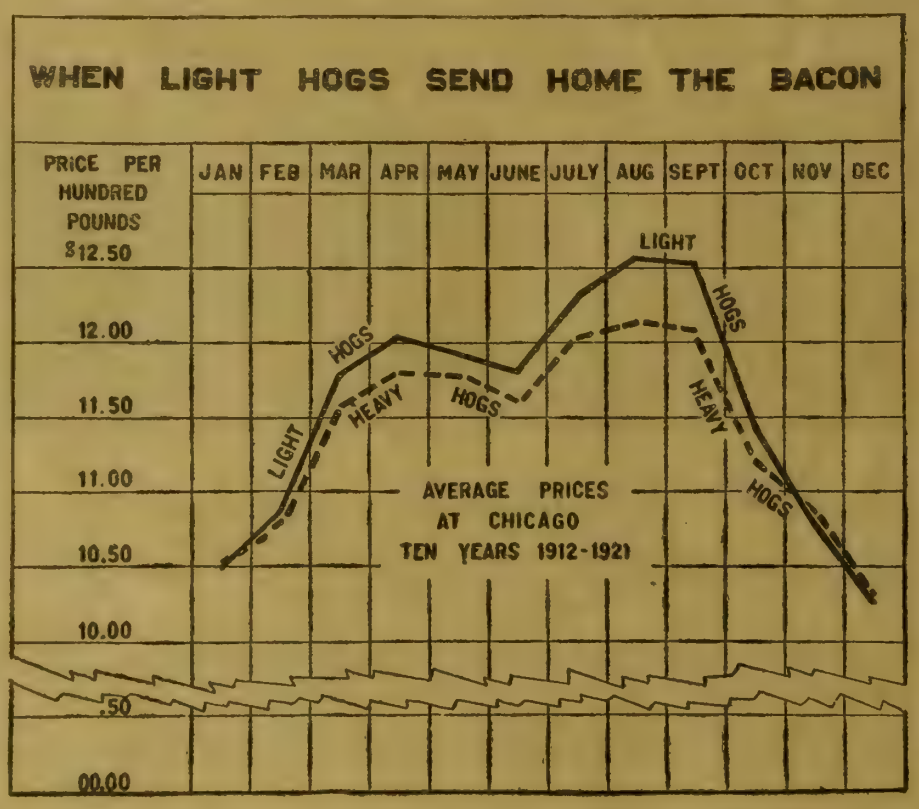
Winter is the chief cattle feeding season. Feed lots throughout the corn-belt are filled during the fall and the cattle fattened on new corn. Almost invariably the result is an excess of heavy finished steers during the spring months which must be sold at a discount.

Once in a while exceptions occur. The disappointing cattle market in the first half of 1921 led many feeders to hold on through the summer hoping the market would recover and enable them to avoid losses. Marketing these cattle was not completed till December. Last fall more light feeders were taken out than normally, so that heavy fat steers were not at as great disadvantage as usual during the past spring.

It follows that the purchase of light feeders during the fall months to be fattened for the spring market is desirable. On the other hand, producers of stockers and feeders will find weight more of an asset during the fall than at other seasons of the year.

Weight Important in Calf Market.

In the calf market weight is an exceedingly prominent factor in determining values. Speaking broadly, the well finished calf seven weeks old weighing 150 pounds is most desirable. Slightly lighter weights do not ship well especially in cold weather, they are apt to be less muscular, and still lighter weights running down below 100 pounds may not meet inspection requirements as to age. Heavy calves get beyond the real "veal" age at about 225 pounds when they sometimes are called "heavy killing calves" and sell far under prime veals no matter how well finished they are. Tastes differ here as the southern and western markets take more kindly to heavy calves than the Middle West and the East, where most vealers are dairy bred. Weight alone may affect calf values as much as $3 or more per hundred pounds.



Lard Hog Not in Demand.

Before the day of lard substitutes heavy hogs sometimes sold at a distinct premium in the winter because they give a slightly higher dressing percentage than light hogs and the product from both sold at about the same price. In recent years the demand for fresh pork and for bacon has expanded so that hogs weighing 160 to 190 pounds produce the cuts which have sold at a premium most of the time. During November, December and January, light hogs from spring farrow are always abundant so that the general average of light hog prices has fallen below the average of heavy hogs even though choice light hogs were selling at the top of the market. The premium on lights is most marked in the summer months when such hogs are scarce and the bulk of the supply consists of fat sows and heavy barrows. The accompanying chart shows the way the situation has worked out on the average during the last ten years.

Little Demand for Heavy Mutton.

The public insists upon the lamb weighing 80 pounds or thereabouts because of the more desirable sized roasts and chops and also for assurance that it is getting lamb. Few lambs, in load lots, exceed this figure very much until the late winter and spring when the feeding season is on. Discrimination against excessive weight is rather sharp, begins when averages run above 85 pounds and may easily amount to $1 per hundred pounds for lambs which are 15 pounds too heavy.

The nearer yearlings come to the specified weight for lambs the better they are substituted for lamb in the dressed trade. Wethers and ewes also sell much better if they do not scale over 100 pounds.

Keep the Manure Spreader Busy on Livestock Farm

BREEDING AND FEEDING ANIMALS AND SOIL BUILDING GO HAND IN HAND

George C. Wheeler.

LIVESTOCK farming, if properly conducted, will be associated with a carefully worked out plan for increasing soil fertility. The farming business cannot continue to exist on land that is constantly decreasing in fertility. Feeding livestock and soil building should go hand in hand. We sometimes wonder if the principles upon which this statement depends are carried out by cattlemen and livestock farmers.

Fertility Often Wasted.

It has been pointed out that the urging of cattle growing as a means of conserving soil fertility will not accomplish the desired result. We are told that the methods practiced by cattlemen generally do not increase soil fertility. Too often this charge is true, for feed is hauled to some sheltered spot along a stream or ravine bank, where the flood waters will clean out the feed lot and save the owner from having to haul out the manure. Out in the field there will be nothing to turn under but the stubs of the feed crops which have been hauled off. This is a pessimistic picture of the manner in which our soil is being depleted.

A similar excuse was offered for not putting up a silo to get larger returns from the forage part of the crop. It was argued that the silo would rapidly deplete the soil because the whole crop was hauled off, leaving nothing to turn under. This was a perfectly plausible argument if no effort was made to get the manure and other refuse from feeding back to the land. If no manure is hauled out and scattered on the field from which the silage crop came, this method of using the crop will more rapidly deplete the soil than pasturing the fodder down in the old orthodox manner, returning perhaps 50 cents to $1 an acre in feed value.

Manure Must Go Back to Soil.

In urging livestock farming, as has been done constantly in Western Farm Life, it has been our purpose to make it clear that manure must go back to the soil; that the animal furnishes a market for rough feed otherwise without value, and in consuming it leaves a large portion of its fertilizing value on the farm to enrich the soil.

Proper handling of manure is a most important factor in livestock farming. On the farm of Ben A. Johnson, where fifty-three steers were fed last winter, Mr. Johnson hauled out 225 loads of manure which he considered worth $2 a load. He tells of a farm he began farming in 1896 on which the yield of wheat to the acre has been raised from fifteen to twenty-five bushels to the acre to forty or fifty bushels, and this increase in producing capacity is due to the fact that cattle have been fed and the manure hauled out every year. Fred Keefover, who farms in Morgan county, covered twenty-five acres of beet land with manure last spring. He figured that he could count on an increase of three tons to the acre over land not so manured. That would mean $15 an acre with beets selling for $5 a ton.

Hauling manure is one of the hard jobs of the farm, particularly if done in the old way. With a manure spreader the task is very much lightened. The ideal method of handling manure is to haul it out to the field each day. On most farms, however, it must be allowed to accumulate and be hauled out on the fields whenever convenient. During the winter season manure can be spread on wheat fields to advantage or on pastures.

On livestock farms where all the manure is cared for and spread on the land the producing capacity is certain to increase. It is a most noticeable fact that on dairy farms, where cattle have been kept for a long time, the soil has constantly increased in fertility. This has been true even though the manure has not been hauled out in many cases until much of its fertility has been lost.

Spreader Profitable Investment.

Spending money for a manure spreader is one of the most profitable investments that can be made on a farm where livestock is kept. This is so not only because it saves a great deal of back-aching labor in scattering the manure, but because it distributes it so evenly that its full value as a plant food is available at once. Plants do not take in their food in solid form. It must be dissolved before it can be taken up by the roots. Manure scattered by hand is apt to be in large chunks or clods, and as long as it remains in this condition it is of little value as fertilizer. It is only as it is broken up into little particles and distributed evenly over the surface, that it can be readily used by plants. This is done by the spreader more perfectly than it can be done by hand, as well as much more easily. By the hand method of spreading, from twenty to thirty loads are sometimes distributed on a single acre. With a spreader as small an amount as three tons to the acre can be spread. This thin even spreading means a great increase in the value of the manure to the crop grown.

The amount of milk any dairy herd may produce in the future is determined to a considerable extent by the kind of bull that is now in the herd. The bull should not only be purebred, but should also be of high producing parentage and of good type. This usually means that most of his daughters will be good cows.

Market Outlook for Farm and Ranch Products

COMING WINTER PRICE LEVEL ON HOGS WILL PROBABLY BE LOWER

Edited by Glenn G. Hays.

THE railroad strike was responsible for a lighter run of cattle last week which advanced top steers at Chicago to a new high for the year of $10.95, and caused a small upturn all along the line with the exception of common steers and butcher stock. There is a generous percentage of shortfeds and steers that have had a good deal of corn on grass so that strictly grassers are hardest to move. An advance in dressed beef prices in the East in spite of large receipts in the week previous helped the market along.

Seven leading packing points received 1,246,000 head of cattle in the last six weeks, compared with average receipts of 1,062,000 head in the corresponding period in the preceding eight years. The supply does not indicate a shortage. Ordinarily from the middle of August to the middle of October weekly receipts at these points increase more than 50 per cent. If cattle have been held back by the strike as reported, a still greater increase later on is indicated. Feeder buyers will take a big fraction of the increment, but the supply for slaughter has not attained the high mark of the year.

The flood of grassers at southwestern markets is steadily rising in spite of rail obstructions. Few good western rangers have appeared as yet. The cause of the delay is in doubt.

Feeder Shipments Largest of Year.

Shipments of stocker and feeder cattle from the twelve leading markets in the week ending August 12 were the largest since the close of last November. Rail conditions were said to be discouraging to buyers, but there is no sign of it in the movement. Prices advanced slightly with fat classes. A slightly lower market may develop as soon as interruptions to rail traffic cease, but with an abundance of feed and other conditions fairly favorable no serious decline is in prospect. Thin cattle prices are on a more reasonable basis than prices for lambs.

Hog Supply Remains Heavy.

Notwithstanding interference with rail shipments receipts of hogs at the eleven leading markets last week were the largest in three weeks, and again were the largest for the corresponding week as far back as the records go. In the last eight weeks arrivals at these markets totalled 4,029,000 head, compared with a ten-year average of 3,498,000 head in the corresponding period. At the same time weights are running about 4 per cent above normal for this season.

Within a month new crop hogs will begin to show up. It is too late to expect much of an advance and the rail situation is too uncertain to be sure of the trend.

The probable winter level is now the center of attention. Packers are predicting $6 hogs at Chicago. This figure may not be reached, but prices probably will go at least $1.50 lower.

Fresh pork prices were higher last week and the lard supply is moving out steadily. In the first two weeks of August over 41,000,000 pounds of lard and 32,000,000 pounds of hog meats were cleared for export. Continental exchange rates appear to be on a basis making purchases impossible, but packers report a fairly satisfactory demand although at low prices.

Lamb Receipts Falling Behind.

Receipts of sheep and lambs at the seven leading markets in the last six weeks totalled 1,151,000 head, compared with average receipts of 1,227,000 head in the same period of the preceding eight years. Under present conditions the cause remains uncertain. The railroad situation is a factor, but the small range lamb crop reported last spring and severe liquidation of cornbelt flocks a year ago may be even more important. Most of the range lambs thus far have been below standard finish, thus helping the market for fat native lambs. Feeder lambs are still being bought actively at high prices. Shipments from the twelve leading markets in the week ending August 12 were the largest since last December.

Wheat Sales Exceed Average.

In spite of apparent obstacles, receipts of wheat at primary markets last week were the largest for the corresponding week with but two exceptions in a dozen years, and about 40 per cent above the average. Cars were stored in the Southwest before the threshing started, otherwise the movement would not have been so heavy. Most of these cars have now been used so that lighter receipts from that section are probable, but spring wheat is beginning to move freely and the total supply promises to continue generous.

A little later Canadian wheat will be a factor in the market, since that country is the principal competitor of the United States for export trade. Canada's surplus is even larger than our own. The plan of a national compulsory pool of the Canadian crop to be handled by a wheat board has been abandoned so that the crop will not be held back except as individual producers decide to do so.

What Will Europe Do?

European buying remains dilatory. Every sign indicates a need for more wheat than last year, but there are none of the big purchases which featured the market last year when August exports set a record of 7,000,000 bushels. Central European countries are in bad shape financially, with German marks down to 1,230 to a dollar, and Austrian kronen at around 60,000 to a dollar, and both fluctuating at a rate which make business next to impossible. France, Italy and Belgium are affected by this situation, but sterling exchange is within one cent of the highest point in several years.

The delay in buying at present means a more concentrated demand later, but Europe apparently is acting on the theory that their own import needs for wheat are no more urgent than the necessity of finding a market for the surpluses of exporting countries. There is also a hint in their recent attitude toward wheat that Europeans are fearful of a crash of some sort and do not wish to be caught with heavy commitments when it occurs.

Statistically, the position of wheat is stronger than usual. The yields in the southern hemisphere will make it still stronger or weaken it, depending upon whether they are below or above the average. Broomhall estimates the Argentine acreage at 12 per cent larger than last year, which will make it about equal to the average.

Drouth Scare in Corn.

Hot, dry weather over the cornbelt has caused more or less damage during the past week. Scattered rains have occurred in the last day or two and how much the loss will amount to is in doubt as there is normally some deterioration during August. The government's estimates take this factor into account by raising the par yield for September 1.2 bushels per acre. Part of the crop was too far along to be severely hurt and the late planted corn was hastened toward maturity ahead of frost so that to some extent the hot weather was beneficial.

Corn prices advanced as a result of dry weather damage reports and also because of a strong demand for cash corn. In spite of heavy receipts the visible supply at terminals has shrunk rapidly recently and still more of it has been sold for early distribution. In the nine months ending August 1, about 35 per cent more corn has disappeared from commercial channels into domestic consumption or gone for export.

Oats Movement Below Normal.

In the first three weeks of the new oats crop year receipts at primary markets fell nearly 20 per cent below the ten-year average for the corresponding period. The extremely low price is anything but attractive and there are reports of replacing oats with wheat in the rotation.

The commercial distribution of oats in the year ending August 1 was 219,461,000 bushels, compared with a ten-year average disappearance of 255,403,000 bushels.

Cash Grain Prices.

The range of cash grain prices: Kansas City—Wheat, No. 2 red, 98c@$1.01; No. 3 red, 92c@$1; No. 2 hard, 95c@$1.18; No. 3 hard, 93c@$1.16; No. 4 hard, 90c@$1.15.

Corn—No. 2 mixed, 52@53c; No. 2 yellow, 57@58½c; No. 2 white, 52½@53½c.

Oats—No. 3 white, 32@34c.

Barley—44@46½c.

Wide Spread in Hay Prices.

Light receipts of good quality hay are sustaining the market for the good grades, but poor hay is in excess of the demand even at a heavy discount. No. 2 timothy is quoted $1 to $4 below No. 1 prices. Clover and heavy clover-mixed is hard to move.

Kansas City—Prairie upland No. 1, $10.50@11.50; No. 2, $9@10; alfalfa, choice $17@19; No. 1, $15@16.50; standard, $13@14.50; No. 2, $11@12.50; No. 1 timothy, $14@15; No. 2, $10.50@11.50; No. 1 light clover mixed, $14@14.50; No. 1 clover mixed, $11.50@$13.50; straw, $6@6.50.

Egg Market Gains Strength.

The egg market is showing more strength than at any time in several weeks. Receipts have dropped off rapidly in the last two weeks, although rail conditions may have been a factor which will mean an increase again later. Storage holdings are now being fed upon the market. The trend of prices is likely to be upward from this time on, but the advance will be gradual owing to excessive storage stocks which must be absorbed.

Receipts of dressed poultry at the five leading markets in the first thirty weeks of this year together with receipts in the same period in the three preceding years, are as follows:

1922 .....107,261.989 pounds
1921 ..... 83,086,012 pounds
1920 ..... 80,311.306 pounds
1919 .....102,813,564 pounds

Poultry handlers are expecting a big run this fall. Prices have declined recently and a further loss is probable the next month or six weeks before time the storing season will begin. Receipts will treble in the next three months if the usual course is followed. Since those who stored butter and eggs this year and poultry (Turn to P...

Recent Range of Livestock Prices at Our Principal Markets.

Cattle—	Denver.	Kansas City.	Omaha.
Choice and prime heavy steers (1100 lb. up).	$9.60@10.00	$10.00@10.75	$9.75@10.65
Good heavy steers	8.50@ 9.75	8.90@10.25	9.00@10.15
Good light steers	8.35@ 9.75	8.65@10.10	9.00@10.00
Common to choice butcher heifers	4.00@ 7.25	4.40@ 9.25	5.00@ 9.00
Common to choice butcher cows	3.50@ 6.25	3.50@ 6.85	4.00@ 7.50
Bologna and beef bulls	2.50@ 3.75	3.00@ 5.25	3.00@ 6.50
Canner Steers	3.00@ 4.00	3.00@ 4.00	3.00@ 4.25
Common to choice feeders (1000 lb. up)	5.50@ 7.50	6.00@ 8.60	6.00@ 8.25
Common to choice stocker steers	4.50@ 7.25	4.35@ 8.25	5.00@ 7.75
Common to choice stocker cows and heifers.	3.25@ 5.00	3.25@ 6.00	3.50@ 5.75
Hogs—			
Top of Market	$ 9.75	$ 9.65	$ 9.45
Bulk of Sales	8.20@ 9.35	8.35@ 9.50	7.00@ 9.25
Heavy (250 lb. up)	8.25@ 9.00	8.15@ 9.20	7.75@ 9.00
Medium (200—250 lbs.)	9.00@ 9.75	8.25@ 9.60	8.00@ 9.35
Light (150—200 lb.)	9.00@ 9.50	8.20@ 9.65	8.50@ 9.40
Smooth packing sows (250 lb. up)	7.00@ 7.50	7.35@ 7.75	7.10@ 8.15
Stock pigs		8.75@ 9.75	8.00@ 9.50

Livestock Pendulum Swinging Backward

CROP MOVEMENTS LIKELY TO BE HINDERED BY SHORTAGE OF CARS.

DURING the period from early 1919 to the middle of 1920 grain prices ruled relatively high compared with livestock prices. The agricultural balance between these two commodities was badly disturbed. The reduction of flocks and herds and of feed lot operations was accelerated by the conditions incident to deflation.

Eventually the pendulum swung to the other side of the perpendicular. Grain and forage prices dropped to a point which made the production of meat, dairy products, eggs and poultry more profitable than the sale of the feeds as such. The recovery in hog, cattle and lamb prices in the last two years made the ratio still more attractive to the stockman.

Livestock Production Stimulated.

Now the pendulum is swinging in the other direction. Generous crops assure a continuance of relatively low feed costs during the coming year. But livestock production shows evidence of stimulation in every form and it is only a question of time until some and possibly all forms will reach the overproduction stage again unless the process is checked when it reaches a proper balance.

If statistics are worth anything it is time to call a halt upon further increases in poultry and hog production. It takes longer to breed the increase in cattle for either beef or dairy. Sheep population estimates show more severe reduction than any other class, so that overproduction of cattle and sheep is more remote. The feeding industry is more or less distinct, however, and the number of thin steers and lambs which may be taken out for feeding is more elastic than the total population of those classes. The prices paid may be higher than succeeding markets really would justify, so that overproduction of fed cattle and lambs may occur ahead of the increase due to more extensive breeding operations.

Car Shortage Developing.

Duringthe last few weeks reports of inability to obtain cars have been coming forward with increasing frequency. Some country elevators have closed because of inability to ship the grain which they have taken in already, although thus far the receipts of grain at terminals have been ample.

The strike of railway shopmen in the last few weeks has aggravated the situation since the percentage of cars and locomotives in bad repair has increased and the roads have been unable to move freight with as much dispatch as usual.

Other causes were at work, however, and the shortage would have arrived eventually anyway. The business revival has increased the retail and wholesale trade and enlarged the volume of goods moving through the channels of distribution. The building boom and enormous sales of automobiles are suggestive of the bigger load which has been placed upon the transportation system. Although a small decline has taken place in the last two weeks car loadings other than coal in the week ending July 22 were only about 1 per cent less than during the record week of October 15, 1920.

Reserves of Coal Depleted.

The coal strike is the most serious factor in the situation. It has directly hampered some of the roads already and will increase the car shortage as soon as it is ended and coal production rises to meet the actual demand. Reserves of coal in all sections have been depleted, householders will try to lay in their winter supply and the movement to the Northwest which usually takes place during the summer, will become enormous in order to make up for lost time. Box cars are likely to be requisitioned for the purpose.

At the present time the railroads report some surplus box cars, but part of these are in bad order and others are remote from the sections where shortages exist. If business expands further during the fall, the crop movement confirms the estimated yields and the movement of coal reaches the high mark expected, it will not be surprising to see car orders each week exceeding the available supply 20 per cent or more.

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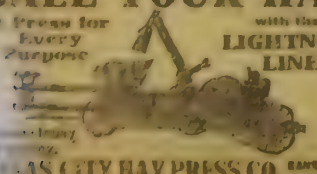

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Getting Rid of Bindweed.

Field or European bindweed is one of the most obnoxious weed pests ever introduced into Colorado. It belongs to the morning glory family and spreads both by seeds and underground runners or rootstocks. New sprouts come up at every joint of these rootstocks and wherever pieces are carried by plowing or harrowing new plants are started. The function of these underground stems is to store up plant food for new plants and the longer the patches of bindweed are allowed to go the larger and more vigorous these rootstocks become. When once established over a large area it becomes a most expensive and difficult task to eradicate this serious weed pest, in fact, farmers have been known to give up and leave their land because the bindweed had taken it.

The most successful means of keeping it in control is to watch for it and when the first patches appear grub every plant, root and branch, and rake them out and burn them. Heavy applications of salt are sometimes resorted to, although the land cannot be used again for several years. There is no quick and easy method to control this weed and from the number of samples sent to Western Farm Life for identification it is gaining ground. Fully a third of the specimens of weeds sent to the Colorado Agricultural College for identification are field bindweed.

Since the plant lives over in the rootstocks the principle to follow is to farm the land for one or two seasons in a bare fallow or clean cultivated crop. Follow with smother crops. In the central and eastern sections of Kansas where the weed has become a most serious pest the Kansas experiment station after trying a number of methods is recommending clean cultivation the first year, followed by alfalfa or some such smother crop as cane the second year. The first year the field should be plowed early in the spring, shortly after the weed starts, and from then on should be cultivated frequently, sometimes as often as twice a week. A spring-tooth cultivator equipped with sharp broad shovels is best for this.

This summer fallow cultivation will so weaken the bindweed plants that they cannot compete the second year with a heavy feeding crop like alfalfa or cane. If cane is planted the ground should be cultivated through the early spring and the cane sowed about two weeks after corn planting time. The third year the field should be summer fallowed again. Alfalfa may be planted in August or September after the first summer of cultivation. It should begin growth so early in the spring that it will smother any bindweed plants that start to grow.

Meat Hauled by Trucks.

A tie-up of railroad transportation will not materially affect the meat packing industry, it is asserted, as 2,500 hogs are hauled daily in trucks to the St. Joseph, Missouri, yard.

Fifteen motor express lines for handling livestock shipments within a radius of forty-five miles of Kansas City have been established for some time past.

Tom Snyder, Secretary of the Indiana Transfer and Warehousemen's Association, believes that with a complete tie-up of railroads the distribution of food products in Indiana could be fully taken care of by motor transport. About thirty days' supplies of all common food products is now in storage in the various commercial warehouses.

It is estimated that the trucks operating out of Louisville, Ky., will be handling soon 500 tons of supplies both on the outbound and inbound trips. Under normal conditions the trucks and interurbans handle 75 per cent of all perishable foodstuffs in Kentucky and southern Indiana.

Seed Treatment Prevents Smut.

Many wheat growers are testing their seed to prevent smut, but not all are obtaining satisfactory results. Following a three-weeks trip through the wheat growing sections, C. D. Learn of the Colorado Experiment Station reports that he finds some farmers enthusiastic for seed treatment, while others had just as much smut as ever and have not a good word for the method. In his investigations he finds that it is not the treatment that should be condemned, but the manner in which it is applied. Too often not enough care is taken in the work.

There are different methods used in seed treatment, but in all probability the most common and convenient method for the farmer is the sprinkling method with formaldehyde. This method is a simple one and requires but little time. It is as follows:

1. Use a clean floor, wagon bed or canvas in the open.
2. Spread out a few bushels of grain. Make the formalin solution, using 1 pint to 40—45 gallons of water, and sprinkle it over the grain as it is being shoveled about.
3. Sprinkle at the rate of one gallon of formalin solution to one bushel of grain. A garden sprinkler may well be used.
4. After all the grain is treated pile and cover with wet sacks or canvas for not less than six hours nor more than twelve hours.
5. Shovel the grain over and spread out in a thin layer to dry.
6. If it is to be stored use clean sacks or bins.

Always store or put the seed in treated sacks. Many farmers go to the trouble of treating and then undo their labors and condemn the treatment because they did not use precautions in storing and putting away in clean sacks or bins. The formalin solution must come in contact with the smut spores and as soon as the grain is dry it may again be covered with smut spores by putting into smutty sacks.

More Purebred Cattle Sold.

Returning prosperity for the cattle industry is evidenced by the increased application for transfers. The number of transfers made by the American Hereford Association during July, 1922, exceeded by 62 per cent those made in July last year. The number of transfers filed for record is an index of the volume of purchases being made by breeders of purebred cattle. An increase of 62 per cent during one month in one record association is strong evidence that the purebred industry is getting back on its feet and that a feeling of security and confidence for the future is being developed concerning the production of beef for the American dinner table.

Hereford breeders report that the demand for purebreds has increased to a point where it is difficult to supply enough suitable bulls and breeding cows for current requirements. Prices are just starting on the upward trend following the recent deflation. Registered Herefords of acceptable quality have been selling at prices which make them attractive to anyone with the ability to handle well bred beef cattle and the vision to lay the foundations now for a breeding herd which is certain to be profitable in the near future.

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Husband's Right in Wife's Property.

A wife has property left her by death of parents. Can her husband claim a share of it and if so, what share?—F. J., Pueblo county, Colo.

A husband has no interest in his wife's property in Colorado. Upon the death of either wife or husband, the survivor is entitled to at least half of the property of the decedent.—Hamlet J. Barry, Equitable Building, Denver.

Maintaining Division Fences.

A wants a line fence between his property and that of his neighbor B. B says he does not want to build his half, but gives no reason for his refusal. What can A do?—S. M., Washington county, Colo.

Farmers living on adjoining farms or ranches must build and keep in repair line fences, each building or paying for one-half of the fence. They do not have to put up a fence if neither of them wants it, but if one desires a division fence the other is obliged to build his half of it and keep it in repair. If he refuses his neighbor as a last resort may build the fence and force him through court action to pay for his half of it.—W. S. E.

Collect Damages for Neighbor's Negligence.

Twice I have notified the non-resident owner of a ranch adjoining my farm of the bad condition of his fences. No one has lived on his ranch for three years and nothing has been done on it, but about eighty cattle are running on it at times and get into my fields and pastures. My stock get out through his bad fences. What can I do to make him repair his part of the fence?—H. C. D., El Paso county, Colo.

Your remedy is an action for damages for your neighbor's negligence.—Hamlet J. Barry, Equitable Building, Denver.

Difference Between Quit Claim and Warranty Deed.

What is the difference between a quit claim and a warranty deed? I was told that a warranty deed held the maker liable for debts and a quit claim did not. —P. A. S., Lake county, Colo.

A quit claim deed conveys the title to real estate without guaranteeing it to be free from defects. A warranty deed guarantees the title and warrants it to be free from any defects. If you own a piece of property and the title is solely vested in you, you are justified in giving a warranty deed and there is no reason for your being called upon for any debt or obligation as far as the real estate is concerned. In purchasing property it is always well to demand an abstract before making payment and to have the title examined by a competent authority. If this is done, when you desire to dispose of the property you are in a position to give an abstract and a good title without undue expense or delay.—W. S. E.

Should Agree With Neighbor.

For eight years I have used the same road across another man's land to get from my homestead to a county road. I cannot get to the county road direct with a team and wagon. My neighbor and I have disagreed and he is threatening to stop my passing through his place. This man is not the same one that owned the place when I started to use the road. An adjoining neighbor also uses the road and we were both promised a right of way by the original owner. Can we be stopped from using this road?—J. P., Gunnison County, Colo.

In my opinion you can be stopped unless this is a public road, which does not seem to be the case. The best thing that you can do is to get along with your neighbor and when you are on friendly terms enter into a written agreement for the right of way for a road.—Hamlet J. Barry, Equitable Building, Denver.

Government Whitewash Recipe.

Please send me a recipe for whitewash to use on the outside of buildings.—A. A., Wyoming.

What is known as the "Government formula" for making whitewash is widely used for outside work. The recipe is as follows: Slack half a bushel of lime in boiling water, covering to keep in the steam. Strain the liquid and add a peck of salt previously dissolved in warm water, three pounds ground rice boiled to a thin paste and stirred in while hot, one-half pound of Spanish whiting, and one pound glue dissolved by soaking in cold water and then hung over a slow fire in a glue pot. To this mixture add five gallons of hot water, stir well, and let stand for several days covered from dust. It is best applied hot.—G. C. W.

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Money for Co-Operative Marketing of Wheat.

State organizations of the Wheat Growers' Association in the states of Washington, Oregon, Idaho, Montana, North Dakota, Nebraska, Kansas, Colorado, Oklahoma and Texas, state that they have 75,000,000 bushels under contract for co-operative marketing this year. These states are organized into zones and already have marketing agencies at work. It is most encouraging to learn that $3,000,000 has been advanced by the War Finance Corporation to assist in financing the movement of the wheat controlled by this co-operative marketing organization of wheat growers. This recognition of the effort of producers to market their own grain instead of simply turning it over to the present agencies is significant of the trend of opinion as to co-operative marketing of agricultural products. Money from the War Finance Corporation has been available to many co-operative enterprises, although in many instances credit has been supplied from local sources.

Farm Machinery Prices.

Rises in the prices of farm implements were but nominal in comparison with the rise of many other commodities, according to the report of the Congressianal Joint Commission of Agricultural Inquiry which has just been published in four volumes. During the season of rising prices we called attention to the reasonableness of farm implement prices as compared with other articles purchased by farmers. Probably many questioned these statements for high price levels bore down most grievously on agriculture, particularly during the deflation process.

This commission was appointed to dig up absolute facts regarding conditions affecting agriculture. In the preparation of the portion of the report bearing on transportation, 1,600 persons, including farmers as well as manufacturers, were consulted. More than 250,000 questionnaires were circulated. Our readers will be interested in some of the facts as brought out in the published report. Price findings of the commission as bearing on farm implements are set forth in the following paragraph on page 156 of Part 3:

"In Part 1 of this report, pages 188 to 192, is given the prices by years of various agricultural implements from 1913 to 1922, inclusive. From this it will be noted that the peak reached in prices of agricultural implements over 1913 or 1914 was 75 per cent, whereas the wholesale prices of all commodities reached a peak of 172 per cent. From investigations made by this commission it was also found that the present factory prices of agricultural implements, if power and twine are not included, when compared with the prices of 1914, show an increase of 41 per cent over the 1914 prices; if power equipment and twine were included in the computation, the increase of prices over those of 1914 would be more than 20 per cent, while the present prices of all commodities when compared with the prices of 1914 show an increase of 52 per cent."

The commission commends the present method of distributing farm implements in the following statement:

"Our investigations also lead us to the conclusion that the agricultural implement companies render special services to farmers in the establishment of their branch houses throughout the various agricultural sections of the United States. About 85 per cent of the farm implements are shipped direct to purchasers, including both dealers and farmers' co-operative associations. The remaining 15 per cent are distributed to the purchasers through the branch houses, which also carry emergency stocks of machines and repair parts, including repairs for machines sold more than thirty years before. A further distinct service to agriculture is rendered through these branch houses by their forces of experts who co-operate with the dealers in assisting farmers to set up, adjust, and repair machines."

The reports of this commission are being distributed through members of Congress. Those desiring copies must write to their representatives.

Soap Lobby Defeated.

Farmers' interests have again won recognition in the framing of the tariff bill now being drafted in Congress. By a vote of thirty-eight to twenty-six the Senate reversed its action of July in committee of the whole and struck out the provision which would rebate to manufacturers and users of vegetable oils intended for non-edible purposes, duties collected at the ports of entry. This leaves a duty of 3 cents a pound on soy bean and cotton-seed oils and 4 cents a pound on cocoanut and peanut oils. This action indicates the power of organized effort on the part of farmers to gain consideration in matters of legislation affecting their interests. A powerful soap makers' lobby has been at work endeavoring to get this concession. For months farm organizations have been hard at work and this reversal of the Senate's action is one of the most notable victories yet won by the agricultural bloc. Farmers may feel reasonably sure that these oils will not come in duty-free since the House bill also carries rates of 2 cents a pound on cotton-seed, cocoanut and soy bean oils and 2½ cents on peanut oil. Both the Colorado senators voted in the affirmative on the roll call which knocked out the rebate proviso.

Livestock Association Making Good.

We wish to commend the El Paso County Pure-bred Livestock Association as an organization that is making good along the lines for which it was intended to function. An organization of this kind cannot continue to exist simply as a mutual admiration society. The members of this association have good livestock, but they are not satisfied unless they are doing all they can to carry the gospel of better livestock to others. The farm visiting tour recently conducted by this association over the eastern end of El Paso county was an unqualified success. It was impossible for a representative of Western Farm Life to make the trip on account of conflicting dates, but we have read with interest the local accounts of the tour and feel sure it will result in raising the livestock ideals of many of those who visited the herds and flocks of that section of the county.

Some enthusiastic talks were made following the picnic dinner. Scotty Duncan, president of the association, presided and introduced the various speakers. Professor Fairbanks of the Colorado Agricultural College commented on the great improvement he noted in the livestock of the section as compared with what he saw on the occasion of a previous visit three years before. He also commented on the fact that the lessons of this trip were much more impressive because the herds visited were owned by ordinary farmers and not the herds of wealthy men. More than a hundred persons made the trip, among them twenty club members from the Calhan, Peyton, Yoder, Drennan and Ellicott organizations, who made the trip in one of the school busses.

Why Not Take a Vacation?

More and more farm folks are coming to realize the value of a vacation. No matter how endless may seem the jobs of the farm, some way can be planned to take a little time off and gain mental and physical stimulus by a complete change of scene. The fair and picnic season is now on and many will make of the fair trip a vacation period. The Colorado State Fair at Pueblo will be the objective of many and it will be a trip both of relaxation and educational value. Those who go to a big fair will of course get weary and footsore, but it will be so different from the usual tasks that no one will mind that. It is none too early to begin to make plans for the vacation trip to the State Fair if it is at all possible to drop the cares and duties of the farm for a few days.

U. S. Grain Grower Reorganization.

On another page of this issue we give a brief account of the reorganization of the U. S. Grain Growers, Inc. It has been apparent for some time that some changes would have to be made to save what had already been accomplished by this big co-operative marketing organization. It was to be expected that any steps taken should originate in the American Farm Bureau Federation, for the whole plan was that worked out by that organization. The men who are assuming responsibility for the future are among the strongest within the farm bureau organization.

"The U. S. Grain Growers, Inc., involves the supreme effort of the American farmer to follow his own product closer to the ultimate consumer," said E. H. Cunningham, new president of the grain marketing agency, in a statement recently issued. "We have no fight against existing agencies and methods. But we do believe most sincerely that the men who grow grain have the right to sell what they produce. And we plan to create a producers' selling agency, which shall function in strict accordance with sound business methods and procedure. We do not expect to establish any great and spectacular reforms while the farmer waits. We hold out no flattering promises to producers that we will be able to reach out into space and get twenty-five, forty or fifty cents a bushel more for their grain than the market justifies. Our grower members must recognize that fact in the beginning, and they will be called upon to exercise patience, as well as co-operation.

"We will do our best to rehabilitate the organization upon sound business principles. We are not fooling ourselves, and we are not going to attempt to fool anybody else. At the proper time, after we have gathered up the loose ends, we shall make a full and frank statement to the public. We propose to start upon a modest scale that will insure financial solvency, and to grow and expand as experience leads and business conditions justify."

The new officers are leaders of the farm bureau movement in their respective states, and have the confidence of the farmers they represent. They have undertaken a most difficult task. Co-operative marketing of farm products on a wider scale than has ever been attempted is certain to come and the officers in charge of the affairs of the U. S. Grain Growers should have the support of all those interested in the success of this movement. They will find plenty of opposition to overcome from those who do not want to see any changes in the method of handling agricultural products.

Woman as Bureau Chief.

Women are coming into their own in the United States Department of Agriculture. In an address given before the American Home Economics Association at Corvallis, Oregon, recently, Assistant Secretary C. W. Pugsley brought a message from Secretary Henry C. Wallace to the effect that he had in mind greatly strengthening the scientific work of the department as it might be related to home economics, having in view eventually making the home economics work an independent bureau. At its head he plans to place a woman of executive ability, thorough scientific training, and a broad and sympathetic understanding of what is needed to make such a bureau most helpful to the women of the land. This will be an epoch-making event in the extension work of the Department.

Already important changes in organization have been made having a bearing on work of interest to women. Several departments of extension work have been discontinued and two divisions created, one the program division and the other the methods division. This simply means that in one division plans will be made as to what information is to be given out and in the other how it shall be presented. Under this plan one or more women sit in every council in the program or the methods division. No program is adopted until a woman familiar with the needs of the farm women has become a party to the determination. On the farm the problems of men and women are shared jointly and in this new organization needs of farm men and farm women and the boys and girls are equally considered when it comes to better farming methods and the improvement of living conditions.

Rio Grande county, Colorado, ranked second among all the counties of the United States in average yield of potatoes per acre in 1919, and seventh in total production, according to a special report of the United States Census bureau. Two Colorado counties, Rio Grande and Weld, are to be found among the sixty-three counties in the United States having each more than 7,500 acres of potatoes harvested in 1919.

From the Nation's Capital

SUGAR INTERESTS HOLD THAT INCREASE IN TARIFF SCHEDULE NOT ENOUGH TO PROTECT INDUSTRY

E. E. Reynolds.

THE Fordney-McCumber tariff bill is making progress, but it has a long way to travel before it reaches the White House for the President's signature. With representatives of the House and Senate engaged in reaching an agreement on the more than 2,000 Senate amendments, and the American valuation plan adopted by the House but turned down by the Senate, and then final action by the Senate and House, it may be three or four weeks, perhaps longer, before it becomes a law. Even now some senators doubt that the bill will become a law before election, if it ever gets out of conference.

The sugar tariff schedules were under discussion in the Senate for several days, ending in a rate of 2.3 cents a pound on sugar, with 1.84 cents a pound on Cuban sugar. This is a slight increase over the emergency tariff, but not what the sugar interests asked for.

Speaking for the beet sugar interests, Senator Townsend of Michigan, said the struggle on the floor of the Senate was a contest between the great sugar refining interests of the East and American beet sugar growers and sugar producers on the other side.

Senator Townsend thought it fair to assume from government figures that for several years to come the amount paid the farmer for his beets will represent not more than 50 per cent of the total cost of producing beet sugar in this country. The minimum price for which the farmer will grow the necessary amount of beets to produce a million tons of sugar is $6 per ton. When the factories pay the farmer $6 per ton, delivered at the railroad station, for his beets, they are paying him at the rate of $2.50 per hundred pounds for the extractable sugar in the beets. If such payment represents 50 per cent of the cost of producing beet sugar, then the cost of producing such sugar will be $5 per hundred pounds. The Michigan senator says this is a careful estimate of the average cost of production for the next few years.

As Cuban sugar costs much less to produce than does the sugar produced in this country, unless there is an adequate tariff the Cuban sugar will ultimately supplant our domestic product, according to Senator Townsend. It was his opinion that "the raising of sugar beets has been generally a profitable enterprise for the farmers in the region of the 106 beet sugar factories of the United States. Fully 95 per cent of the beets raised each year are grown by farmers under contracts made from year to year with the sugar companies. In the fall of 1921 there were harvested in this country 7,500,000 tons of sugar beets. Directly engaged in the growing and handling of the crop were 100,000 farmers, 85,000 field workers, and 35,000 mill operatives. The manufacturing companies paid the growers of beets in the fall of 1921 about $50,000,000. Sugar beets are the only farm produce which is universally sold direct by the farmer to the ultimate consumer without the intervention of any middleman. This insures the farmer the maximum returns for his crops. Fully 75 per cent of the beets are grown within forty miles of the factory. No other crop is marketed with such great economy of transportation costs."

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Committee Reports Against Muscle Shoals Project.—In their report on the Muscle Shoals project, which is just now engaging much attention, having become a great nationwide issue, the seven minority senators of the Agriculture Committee declared that even those who are in favor of government ownership and operation of the great nitrate fixation and power plant at Muscle Shoals, Alabama, must concede that this case is one fraught with the gravest danger of heavy losses if the government undertakes to work out the fertilizer problem there.

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Voight Bill Still Help Up.—The filled milk hearings have closed, but it is not thought probable that the Voight bill will pass the Senate before winter. The opponents of the bill based their arguments largely upon the grounds that filled milk was necessary to supply the poor people who could not afford to buy pure milk. It was later proved by the proponents of the bill that filled milk was being sold in many states at practically the same price as that charged for whole or condensed milk, showing that retailers and not the consumers absorbed the additional profit.

Representatives of the filled milk manufacturers accused the proponents of the bill with having entered into a trade conspiracy to injure a certain manufacturer of filled milk, but when asked to introduce evidence of a conspiracy could not do so.

While the bill to prohibit filled milk is of vital interest to every dairyman, A. M. Loomis of the National Dairy Union, points out that the vegetable oil tariff vitally affects the livestock industry and every other farm industry.

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Ship Subsidy Still Being Opposed.—If the Henry Ford offer to buy the nitrate plant and lease the power plant constitutes a subsidy to Mr. Ford, it is not such a subsidy as is proposed by the administration in the ship subsidy bill. The senators say that the proposed ship subsidy would cost the government $41,500,000 annually for ten years. It returns 7 per cent of the total cost of the ships and leaves the government with nothing. It calls for an expenditure of $125,000,000, which the government is to furnish as a loan to the operators at 2 per cent, and then takes at least $41,500,000 annually for ten years from the public funds and gives it to the operators as a subsidy to enable them to repay the loan. The purchaser pays interest, not on the actual cost of the ships, but on about one-third of their pre-war construction cost.

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Farmers Weary of Capital and Labor Disputes.—The farmer demands that capital and labor cease their petty bickerings and resume production, trusting to the American sense of fair play to see that justice is done to both of them, declared Secretary of Agriculture Wallace in a farm bureau address in Virginia.

While the farmers' purchasing power is from 25 to 45 per cent less than in 1913, the railway employes' purchasing power is 51 per cent and the coal miners' 30 per cent above that of 1913, the farmers have not struck. They have not created disorders. They have kept on producing, and in the face of extraordinarily low prices have this year grown one of the largest crops in our entire history. The farmers believe in law and order; they believe in government; they believe in fairness between man and man.

"If other groups would do as the farmer has done," said Secretary Wallace, "our economic troubles would soon be over. Prices would soon be adjusted to their normal relationships. There would be work for everybody and at just wages.

"But there are too many people who seem to be thinking only of themselves and how they can profit at the expense of the community at large and especially at the expense of the farmer. The farmer is sick and tired of this sort of business. He is disgusted with these recurring disputes between capital and labor, especially as connected with the essential industries. The farmer recognizes his obligation to produce food, for people must eat to live. He demands that both the owners of the coal mines and the coal miners recognize their equal obligation to produce coal, and he demands that the management of the railroads and the railroad workmen recognize also their equal obligation to keep trains moving, for unless the food he produces is moved promptly to market the people will starve."

Save Time When Time Counts!

Don't stop your mowing to go for a new knife. Don't stop to rivet up a new blade in place of a broken one. Use the

A-M-F SICKLE BAR

It has instantly removable blades. You can slip each one out in a jiffy after you've unlocked it. But nothing can shake it loose after you've locked it in with the keystone wedge — itself locked in place. Tests have proven it.

You don't lose a moment in the field. If you break or dull a blade you can replace it with a sharp blade in less than no time. You don't even have to take the knife out of the machine. It's as easy as slipping a new blade in a safety razor.

All the spares you need are a dozen blades. You don't have to tie your money in complete spare bars. And you carry the blades in your toolbox—always at hand.

The A-M-F Bar is stronger than old type bars. It is built on the truss principle—like a railroad bridge. It won't break and won't bend, but always runs free and true.

We guarantee it.

Any bar or head which breaks within a year from date of purchase will be replaced FREE. Rust-proofed by the A-M-F Intraloy Process.

Think of this! A-M-F Blades are high carbon steel—hard to damage. They hold their edge better, and you can take them out of the bar and grind them singly—clear down to the heel. It's the only way to keep mower knife cutting clean.

A-M-F Sickle Bars are made for all the modern standard mowing machines. It takes only a moment to fit one to your machine.

Ask your dealer—or write us!

SEE THE A-M-F SICKLE BAR AT YOUR STATE FAIRS

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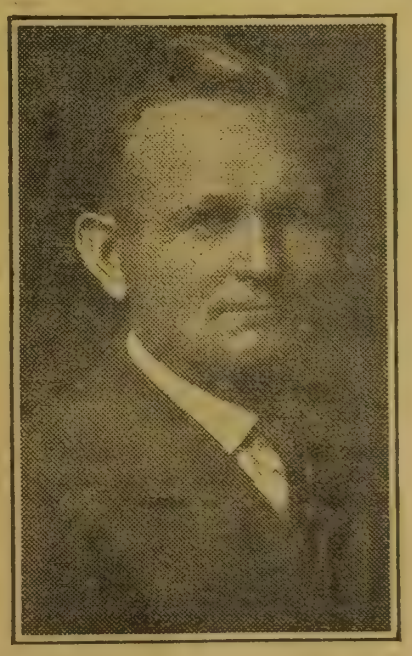

CHARLES DAVIS,
GREELEY,

Who Received Top Designation, Republican Assembly,

For State Treasurer

Mr. Davis lives on a farm one mile from Greeley, where he is interested with his son who is farming the place, while at present Mr. Davis is Deputy State Treasurer. He is married, has a wife and nine children—five boys and four girls, all in Colorado.

He will appreciate your vote at the primary, September 12th.—[Political Advertisement.]

Would You Like a Position in Denver?

In deciding upon a business school, it is more than training you want—you want a position. If you would like a Denver position—secure your training in a Denver school. The Barnes School specializes in positions and will fill more than a thousand places this year. Write today for 56-page catalog.

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The Rural Household

Questions about home problems promptly answered by letter and through the magazine. Letters from women containing helpful suggestions for improvement of rural life are always welcome. Address all communications to Mary G. Collopy, Editor Home Department, Western Farm Life, Denver, Colo.

"Judge Not."

Talk not of strength until your heart has known
And fought with weakness through long hours alone,
Talk not of virtue till your conquering soul
Has met temptation and gained full control.

—Ella Wheeler Wilcox.

My Neighbor's Story.

When Mr. Irving came in to supper he was surprised and pleased to find his wife in such good humor, singing and smiling. For weeks she had been complaining and nagging. The weather was unbearably hot—she was tired of running after chickens—so many children to care for (yet she wouldn't give one up)—what was life, but one meal after another! Such had been the cry whenever her husband entered the house.

"Well, Martha, that trip to town cheered you up quite a lot; what movie did you see?" jokingly asked Mr. Irving.

"John, it wasn't a movie; it was a hospital I visited. After supper I'll tell you about it, but you'll never hear me complain of walking in the heat again after I saw those patients lying in plaster casts," replied the changed wife.

Serving Suggestions for Church Supper.

In the last issue we talked about one way of serving; namely, passing the filled plate after your guests are seated. This is the most economical method and the one you will wish to use if the price requires that only a definite amount be served to each. Another common way of serving is "family style" with the food placed on the table in large dishes. This method is easy and does save time. Cafeteria style is becoming more popular all the time. It makes the service very simple; gives your patrons all the requirements of appetite and affords possibility of economical serving.

For those who live in small towns where a church supper means considerable buying there are a few points which may help. Let one or two, or at most a committee of three, be responsible for all of the buying. Do not order by telephone. Use the phone previously for comparing prices. Do not buy the cheapest always. You want quality. Never buy the fancy cuts of meats; cheaper cuts, properly cooked, are very acceptable. Remember your meat bill bears a definite relation to your profits. Out-of-season foods you will not be able to afford.

Chicken, veal or beef pies are excellent if you plan a hearty meal. Veal or beef loaf, with sauce, or pressed chicken are always good. In rural communities where there are plenty of chickens, serve young roast chicken. If a lighter meal is planned, serve chicken salad and hot vegetables. The following are two good samples of menus:

Creamed chicken, rice, peas, pickles, or celery, rolls, Bavarian cream or fruit jelly with whipped cream, coffee.

Cold meat loaf, escalloped potatoes, string beans, pickled beets, ice cream, cake, coffee.

If hot meat loaf is served, use cold potato salad. Your menu depends largely upon the season of year and your locality. Perhaps you live in a corn district—why not a "roasting ear feed?" You could make extra money out of the red ear. Or, having plenty of corn, you may want to serve corn relish instead of pickles. You must decide which is cheaper for you. Watermelon suppers require very little work and yield good profit if the buying is wisely done. Do you always auction off what is left?

Use Good Jar Rubbers.

It is said by good authority that 98 per cent of spoilage in home canned vegetables is due to the use of poor jar rubbers. Before you begin to can be sure that you have a source of supply of good rubber rings. Good rubber rings must not have any powder on them. There is only one cause for powder being on the rings and that is the age of the rings. Some people may tell you that the rings are packed that way, but it is not true. Do not try to wash or boil the powder off the rings. When there is powder on the rings the rubber is "dead."

Rubber rings should endure a strong pull and twist without breaking or remaining stretched. Of course no one would use a ring that would break, nor should you use one that is so elastic that it becomes larger in size when pulled.

Rubber rings cost very little. It is an easy matter to secure good rings. Your grocer will be glad to purchase them for you if he does not have them in stock.

Buy a good rubber ring at the cost of three-fourths of a cent and save a twenty-five cent can of vegetables.—Maud Sheridan, State Leader Boys' and Girls' Clubs.

Our Fashion Service.

All patterns 12 cents each. Address Western Farm Life, Pattern Department, 1518 Court Place, Denver, Colo.

Read This Before Ordering: Patterns ordered through this magazine are mailed promptly from the factory at Brooklyn, N. Y., and arrive in 10 to 12 days from time order reaches Western Farm Life. Be sure to specify size and number of patterns. Write your name and postoffice address plainly to avoid delay. These patterns are handled at cost, as a service to our women readers. The price of 12 cents includes postage.

3974—A Dainty Up-to-Date "Morning Negligee." Here is a charming breakfast coat for my lady of leisure, which will serve also as a negligee. It is pretty

in the new printed voiles or tissue ginghams, as well as in dotted Swiss and crepe. As illustrated, printed foulard and lace are combined. Cotton crepe

Steadfast as the Oak Tree—Time's Judgment on the Colt "Gas Well"

THE oak tree is a living symbol of solidity, sturdiness and durability.

Only after an amazingly long and sturdy existence does it bow to the will of Time.

Having read about the marvelous COLT Lighting and Cooking Plant, you doubtless have wondered how *permanent* it is. How long it will continue to shed its incomparably beautiful white light. How long your wife will have that delightful city convenience of cooking, ironing and heating water by Carbide Gas. How simple will be its operation. How economical. How much attention will be required. How often you will have to call for service, replace parts and units, mend and repair. *In a word, how will the COLT weather the Test of Time.*

Let COLT users speak. They know. They speak from experience—*long* experience. And there are legions of them. Altogether close to a half million farmers and others in rural communities light and cook with this wonderful, non-poisonous Carbide Gas. Here are three letters out of scores that testify to the oak-like durability and sustained perfection of the COLT.

Twenty-four years' Service, practically no repairs

April 28, 1919.

J. B. Colt Co., New York City.

Gentlemen: — Answering your letter of recent date, will say: We have used your Colt Generator for about twenty-four years. It is a 200-light machine and we have 200 lights hanging on it. The Generator has given us the best of service in all this time. The machine has been doing its work at practically no cost to us for repairs of any kind. Very truly yours,

(Signed) P. R. JOHNSON.

There is the test of time.

Another letter from Bradford Norman, 5 West Marlborough Street, Newport, R. I., reads:

"J. B. Colt Co., New York, N. Y.
"Dear Sirs:

"Will you please send me one felt filter for my machine? This machine was installed over twenty years ago and has given perfect satisfaction during that time and the above order is the first expense outside operating (an occasional drum of carbide) that I have had to make."

The test of economy—less than one dollar in twenty years for part replacement!

After Ten Years, Works Like New

Cheapest and Best Farm Light

Shiloh, Ohio, May 22, 1920.

To whom it may concern:—

Ten years ago I had a J. B. Colt lighting system installed in my former home at Lexington, O., for which we used continuously during that time for both lights and cooking, and never cost one penny for repairs, to-day my younger brother lives there and it works as well as the day it was installed.

One year ago I purchased the farm where I now live, and one of the first things I did was to buy another J. B. Colt light plant and have it installed. I have my house and barns both lighted with it and wouldn't do without it for several times the cost, after ten years use I figure it the cheapest and best light for the farmer.

Very Respectfully Yours,
C. K. INK, Shiloh, Ohio

The Final Test

The Government needs for its beacon lights at the entrance of harbors and along rocky ocean shores the most dependable and economical lighting system it can procure. What light is used? CARBIDE LIGHTING! What generators? MOSTLY COLTS!

Simplicity and Economy

Feed the generator Carbide once in a while and run water into the water chamber—that's all you need do. The machine makes the gas automatically. *No continual replacement of parts and power units. No service necessary. Your Colt is a lifetime investment in reliability, simplicity and economy.*

The COLT comes from factory to farm—sold direct to you by COLT solicitors—no distributors or dealers to take a profit. This applies everywhere. A substantial saving here.

Don't Invest in Any System Until You Have Heard the Full Story of COLT

An investment in better light, better cooking, comfort, convenience and happiness indoors is the best investment you can make—*Get the FULL STORY of the COLT before you make that investment.* Send post card to address below today.

PAY IN A YEAR

NO MONEY DOWN

J. B. COLT COMPANY

30 East 42nd St., New York 8th and Brannan, San Francisco

COLT TRADE MARK

Oldest and largest manufacturers of Carbide Lighting-and-Cooking Plants in the World

CARBIDE LIGHTING-AND-COOKING PLANTS

ESTABLISHED 1891

(POLITICAL ADVERTISEMENT)

Why William E. Sweet Represents the Farmers of Colorado

He believes that the State government should help the farmer create non-profit cooperative marketing organizations, that the office of Market Director should be established to furnish leadership, advice and counsel to the farmers in order that these organizations may be formed on sound business principles.

He believes that the State should build warehouses at convenient points, where farm produce may be stored until it can be marketed to the best advantage.

He believes the State should pay as much attention to stabilizing the credit of the farmer as it does to stabilizing the credit of the business man.

He believes that taxation can be best reduced by cutting out the waste at the Statehouse, by eliminating useless commissions, and consolidating others.

Feed Your Hogs MERRY WAR LYE

HOGS eat better when a little MERRY WAR LYE is mixed with their feed—and you know it takes appetite to make meat and fat. MERRY WAR LYE also tends to reduce acidity of feed—helps build up the resistance of hogs to certain diseases and helps tone them up. Thin, scrawny, sickly hogs usually improve quickly when fed MERRY WAR POWDERED LYE—even healthy hogs do better. Costs little to feed—120 feeds in every can—pays for itself many times over.

Directions For Feeding

Thoroughly dissolve a tablespoonful of MERRY WAR POWDERED LYE in a little water and mix well with feed for ten hogs or thoroughly dissolve HALF a can in water and mix with a barrel of feed. Stir well and feed night and morning. If on dry rations thoroughly dissolve HALF a can of MERRY WAR LYE in each barrel of drinking water. Follow directions carefully.

For years hog raisers have been feeding MERRY WAR LYE—they know what it will do. Profit by their experience—feed your hogs MERRY WAR LYE.

Look For The Picture of The Hog on The Label

It Is The Sign of Safety You will find it only on "MERRY WAR"—safe Lye for hogs.

Sold by Grocers, Druggists and Feed Dealers

E. MYERS LYE CO. *Established 1888.* St. Louis, Mo.

MERRY WAR LYE

"Hear It By Radio"

A MARSHALL-GERKEN RADIO RECEIVING APPARATUS will bring clearly all music, speeches, reports and news items into your home. This set is scientifically constructed by radio specialists of long experience and is mounted in beautiful cabinets.

SET COMPLETE FOR INSTALLATION..... $125.00

Let us help you in your radio problems.

ROCKY MOUNTAIN RADIO CORPORATION,

1512-1516 Broadway, Denver, Colo.

Make our store your radio headquarters.

BUCHANAN & HENRY,
LIVESTOCK
AUCTIONEERS
1927 Broadway Denver, Colo.
Write us, or Phone Champa 4655.

Overheating on Low.

When it is necessary to employ the low gear for a considerable period it is possible to obviate the overheating that would ordinarily result by keeping the mixture in the leanest possible condition.

with a finish of hemstitching is equally attractive. The pattern is cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires 3⅛ yards of 40-inch material.

3970—A Smart "One Piece Model." This simple style will find many admirers. It is attractive for gingham, linen, as well as speaks for grace and comfort and is also jersey. Binding of braid or contrasting material will form a suitable decoration. The pattern is cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires 4¾ yards of 40-inch material. The width at the foot is about 2 yards.

3954—A Simple Play Garment. For the roly poly "small" person—this one piece model will fill every requirement of ease and comfort. Bands of plaid or check gingham on linene, or checked gingham with white pique for trimming will be good for this style. It is cut in five sizes: 1, 2, 3, 4 and 5 years. A 2-year size will require 2⅝ yards of 27-inch material.

3952—A Popular Style. Just like "big sister's" "cuff and collar" dress is this model for the "little one." It may be of one material such as illustrated. Cretonne or chintz; or the skirt may be of gingham or chambrey and the waist of crepe, linen or batiste. Pongee would be nice for this with frills of organdy. The sleeve may be in wrist or elbow length, and the collar may be omitted. This pattern is cut in four sizes: 1, 2, 4 and 5 years. A 2-year size requires 2¾ yards of 27-inch material.

Control of House Fly.

Now the fly is here and we take time to effect temporary remedial measures, such as screens and fly traps. In addition to screening houses for temporary fly control, the following preparations are suggested by the Colorado Agricultural college:

Fly-tangle—A sticky fly-paper which will almost take the place of tanglefoot, may be made by melting one-half pound of rosin and adding enough olive, castor, or lard oil to give it the consistency of molasses. With a brush spread this mixture on small sheets of wrapping paper, leaving about one inch margin all around. Place two sheets with the sticky sides together and when desired for use pull them apart. This acts as tanglefoot and may be used to destroy other insects.

Poison Fly-paper—A very convenient poisoned fly-paper which acts as "dead shot" may be made as follows: 6 drams of chloride of cobalt, 2 ounces of brown sugar, 1 pint of boiling water. When the chemicals are all dissolved, saturate a blotting paper in the solution and allow it to dry. When necessary to use, place small pieces of this paper in saucers with water.

Market Outlook for Farm and Ranch Products.

(Continued from Page 5.)

last winter have been in a losing game, they will probably be very cautious when the poultry storing season begins this fall and will wait for a low price level.

Denver—Eggs, 25@27c. Live poultry—Hens, 15@20c; springs, 20c; broilers, 20c; roosters, 7c; turkeys, 27c.

Light Receipts Boost Butter Prices.

Light receipts were the primary cause of a gain of 1 to 2 cents in butter prices. This is the normal period for an advance, as the storing season generally ends by the middle of September. The recent heavy movement into storage almost disappeared. Hot, dry weather has damaged pastures and reduced production as well as lowered the average quality. The rail situation may have retarded shipments to market. Export inquiries helped the upturn along. Prices on 92-score fresh butter on August 18 were:

Chicago, 34½c; New York, 36c; Boston, 36½c.

Fruits and Vegetables.

In addition to large local supplies the carlot movement of potatoes has become heavy again and markets are weak. Early Ohios are quoted at $1 to $1.15 a hundred pounds sacked in midwestern wholesale markets. Carlot shipments in the week ending August 12 were 4,341 cars, compared with 3,860 cars in the corresponding week last year, 3,006 cars two years ago and 2,942 cars three years ago.

The increase in the commercial apple crop is in the barreled apple states, which have 19,965,000 barrels, compared with 7,385,000 barrels two years ago. The boxed apple shipping states have about 13,347,000 barrels, compared with 13,819,000 barrels last year. Carlot shipments of apples in the week ending August 12 were 993 cars, compared with 649 cars in the corresponding week last year, 704 cars two years ago, and 550 cars three years ago.

Save with Safety!

Quality Merchandise at America's LOWEST PRICES!

PHILIPSBORN'S merchandising experts have spent months collecting, comparing and choosing the newest, smartest, most attractive styles—the best the market affords—all of which are presented in this 312-page Style and Shopping Guide for Fall and Winter—the finest, most elaborate, most interesting style book ever published.

Don't spend one penny until you see this free, color-illustrated Style Book of new, quality merchandise at America's lowest prices.

Over 3,000 Bargains!

For 32 years PHILIPSBORN'S has led them all in styles and values. Over three million customers will attest this fact. To sell right we must buy right, and PHILIPSBORN'S buy and sell at the lowest prices in the U. S. A.

Styles Endorsed by IRENE CASTLE

IRENE CASTLE, the famous style authority and America's best-dressed woman, says: *"The PHILIPSBORN Style Book for Fall and Winter is in my opinion the finest ever issued by any mail order house. Every mail order shopper ought to have a copy."*

We Prepay and Guarantee!

PHILIPSBORN'S spend over One Million Dollars annually to PREPAY delivery charges to your home regardless of where you live. Our 32-year-old policy is to satisfy the customer completely. We not only refund your money instantly, to the last penny, but also pay return delivery charges.

Send Coupon or Postal!

Write for your copy of PHILIPSBORN'S 312-page, Color-Illustrated Style Book—TODAY. You won't know what the new Fall Styles look like until you get this FREE book. Clip the Coupon—and mail it NOW!

PHILIPSBORN'S
Founded 1906
Department - 737 - Chicago, Ill.

"I Want a Catalog"

PHILIPSBORN'S, Dept 737, Chicago, Ill.
Please send copy of PHILIPSBORN'S Style and Shopping Guide for Fall and Winter.

Name.....
City..... State.....
Local Address.....
PLEASE WRITE PLAINLY

DON'T FAIL to address your request to Philipsborn's Style Book to Department 737. This will assure IMMEDIATE ATTENTION and you will get the book by [illegible] mail.

Farmers' and Stockmens' Ready Reference Directory

Harry Carlson. D. G. Irions.

RADIO SPECIAL

Incorporated.

1511 Cheyenne Place, Denver, Colo.

We handle ALL Standard Radio Equipment and will install AND GUARANTEE radio receiving sets in your home, school, club, or grange. Get music for dancing, stock and market reports, world news, weather reports, etc.

THE LARGEST STOCK AND FINEST RADIO STORE IN THE WEST.

NEW RADIO GUIDE AND CATALOG..... **15c**

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The Reynolds Radio Co., Inc.

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High-Grade Radio Receivers

We manufacture and sell direct, thereby eliminating profits of the middleman.

Write us about your needs. Our Technical Department is always at your disposal.

Shaw-Holden Radio Mfg. Co.

2413 Fifteenth St. Denver, Colo.

GET IN TOUCH—

Buy Radio Apparatus

Prompt attention. Write for prices.

WILLIAMS & ROSE RADIO,

435 Fifteenth St. Denver, Colo.

WE MANUFACTURE HIGH-GRADE

RADIO APPARATUS

at prices which are consistent with such work. We are equipped to do every kind of machine work and winding, and specialize in building sets to order, any size. Representatives wanted in all sections.

A. & M. RADIO MFG. CO.,

233 E. SEVENTH AVE. Denver, Colo.

CLEAR-TONE RADIO

Manufactured by **The Buck Air Craft Syndicate, 1958 Broadway, Denver, Colo.**

Our Chief Engineer was one of the first wireless operators on a Government steamship, and has been building Radio Sets since 1903. Standardized sets for the home and Automobile. Special sets for schools, clubs and lodges built to order. AGENTS WANTED.

UNIVERSAL ELECTRIC LIGHTING SYSTEMS

Used by U. S. Government, for farms, towns, churches or schools. Electric Accessories, Gasoline Lighting Systems, Pressure Burners, Pressure Stoves.

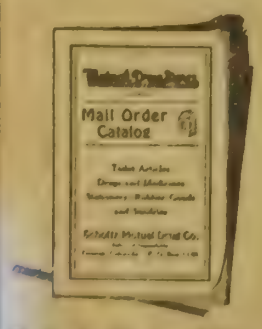
The National Arc Light Co.

1823 Welton Street. Denver, Colo.

3 Lbs. $1.00 — SPRAY'S COFFEE — Parcel Post Prepaid

THE SPRAY COFFEE & SPICE CO., Denver, Colo.
Mail Order Dept., 2110 Market Street.

SAVE 5% to 40%



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Send for our big free catalog with cut prices on drugs, medicines and household supplies.

Scholz Mutual Drug Company
Denver, Colorado

European Plan. One Dollar and up.

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KENMARK HOTEL

IN THE CITY'S CENTER.

POPULAR PRICED LUNCHROOM AND RESTAURANT IN CONNECTION.

A home-like hotel with all modern conveniences. All Seventeenth St. Cars direct.

Denver, Colo. E. C. BENNETT, Mgr.

Complete Stock of RADIO Units

On hand for immediate delivery.

Winner Radio Corporation

Distributors for

Radio Corporation of America.

1710 Glenarm Place. Denver, Colo.

RADIO After you have looked over what others have to offer—including prices—let us show you what we can do for you. We have everything for you RIGHT NOW, including WESTINGHOUSE SETS, and all necessary Radio parts.

BALL RADIO SUPPLY HOUSE,

317 SIXTEENTH ST., DENVER, COLO.

(Opposite Court House)

Write us at once. Let's get acquainted.

RADIO for the farm. Hear the daily concerts, opera, crop and market reports with the guaranteed **Nesco Add-More-Power Radio Phone.** Introductory discount to first purchaser in new territory. Write today for prices and full descriptive literature.

COLORADO RADIO COMPANY,

1719 Champa Street. Denver, Colo.

Have Your Drinking **Water Analyzed**

It may be healthy or dangerous.

Soil Analysis and Electro Deposition of Ores.

ENGINEERING and RESEARCH LABORATORIES

Wm. A. Sharpe

1829 CALIFORNIA STREET.

Denham Building... Denver, Colo.

Finish Your New Roof and Renew Old Roof with

Elastic Graphite Roof Coatings

Made and tested for 10 years in our Western Climate and fully guaranteed. Our full line of House and Barn Paints manufactured with same care and purpose to stand the Dry Climate, is sold with a money-back guarantee. Inquire of your local dealer or send to our factory.

ELASTIC PAINT & MFG. COMPANY,

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For Repairs. Our Prices Are Reasonable.

We Examine Eyes at No Charge

Free Booklet on

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Ford Optical Co. 1029 16th St., Denver, Colo.

Keep Your Hogs Healthy

Plenty of water at the right temperature in zero weather keeps your hogs healthy and makes them grow faster on 25% less corn. Keep your hogs healthy this winter and save yourself work and feed. The gain your hogs make will soon pay for an

IDEAL HOG WATERER

The heavy galvanized, corrugated outer casing reinforces the Ideal to withstand rough farm-yard usage. For less than two cents a day you can give your hogs warm water and save yourself the cold job of cutting ice. The drinking trough in Ideal Waterers is inside the outer casing and protected against damage. Ideal water tank easily lifts out of the casing.

Write us for your nearest Ideal Dealer's name and our special book on Ideal Hog Waterers and other hog lot equipment,

W. W. GRISWOLD, Rocky Mtn. Agt.,
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Largest stock in the west. All makes, all models. Prices GREATLY REDUCED We sell on Easy Payments. Ship subject to approval and guaranteed. Send for BIG FREE LIST L.

FLOYD CLYMER, Denver, Colo.

"Largest Motorcycle Dealer in the West."

WE MANUFACTURE AND SELL DIRECT

Ladies' House Dresses, Aprons, Wash Dresses, Etc.

Mail us your hemstitching and button-hole work. Call when in Denver—or write for list and prices.

THE GARMENT SHOP,

Miss L. Jones, Proprietress.

605 Fifteenth St. (Ground Floor), Denver, Colo.

WE LOAN MONEY ON FARMS

PROMPT SERVICE—LOW RATES.

The Western Securities Investment Co.

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DO YOUR FEET HURT?

If you are troubled with corns, callouses, bunions, weak foot, fallen arches, consult the real foot specialists.

FREDRICK & FREDRICK

FOOT SPECIALISTS

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Stove and Furnace Repairs

STOVE SUPPLIES

STOVES AND FURNACES.

The J. A. Battin Stove Supply Co.

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Everything for your cooking and heating plant.

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Established 1887.

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Gets Positions for Students.
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Earn Part of Expenses.

Send for Catalog.

211 Fifteenth St. Denver, Colo.

WE INVITE YOU TO COMPARE OUR SERUM regardless of price. Many large cattlemen have done and now would use no other. 20c PER DOSE. WHY PAY MORE? Write

THE U.S. BLACKLEG SERUM CO. INCORPORATED

STOCKYARDS STATION
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WESTERN CANADA for Big Wheat Crops

Canada is the world's greatest producer of wheat—second only to the United States—yet only about 12% of the tillable area has been worked. Yields of 40 bushels of wheat per acre are not uncommon.

Oats have given as high as 100 bushels per acre, while 40 to 50 bushels per acre are ordinary yields; barley and rye in like proportion. Cattle and horses thrive on the native grasses which grow abundantly and corn and sunflower culture are highly successful.

Stock Raising, Dairying and Mixed Farming

secure for the industrious settler ample returns for his energy. Clearing the cost of one's farm with a single year's crop has an appeal, and has been done by hundreds of Western Canada farmers. Taxes only upon land (not on improvements). Perfect climate, attractive social conditions, good neighbors, churches, schools, telephones, excellent markets and shipping facilities make life happy as well as prosperous.

For illustrated literature, maps, description of farm opportunities in Manitoba, Saskatchewan, Alberta and British Columbia, **reduced railway rates,** etc., write to

K. HADDELAND,
104 Central Ave.,
Great Falls, Montana,

Authorized Agent, Dept. of Immigration and Colonization, Dominion of Canada.

QUICK SERVICE ON MAIL ORDERS.

THE CAPITAL CITY SHOE REPAIRING CO.

Henry Warnecke & Son.

Our Prices bring repeat orders.

1511 Champa Street. Denver, Colo.

Write for circular on

Furniture, Rugs, Linoleum, Stoves, Home Furnishings

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Windmills, Irrigation Supplies, Pumping Equipment.

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Red Cap Batteries

AT REDUCED PRICES—2-YEAR GUARANTEED.

Cost less per month to operate. Repairing and recharging.

KYLE BATTERY CO.

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GAINES WINGS

FIT EVERY MAKE OF CAR. Made of bronze and aluminum; polished and nickeled. Rust and tarnish-proof—in short, the PRACTICAL Wings. If your jobber or dealer does not handle them, write direct to us; or send us his name.

THE GAINES-ERB MFG. CO.,

Office: 232 FIFTEENTH ST., DENVER, COLO.

BEE-KEEPER SUPPLIES

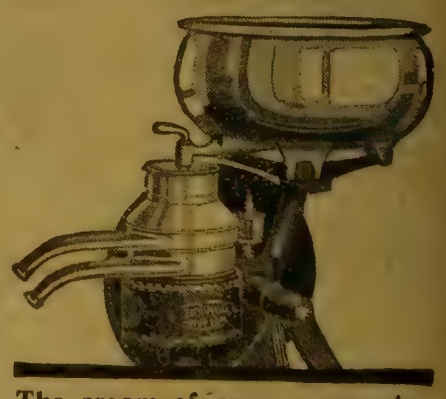
of best quality. Send for price list.

Pure Honey, Comb or Extracted,

in any quantity. Write for prices.

THE COLORADO HONEY PRODUCERS' ASSOCIATION,

1424 Market Street, Denver, Colo.



The cream of cream separator prosperity goes to De Laval users

There was never greater need than right now for the best separator, one which skims cleanest, has greatest capacity, turns easiest, requires the least care, and produces the most perfect product. In all these respects the De Laval has no equal. Take nothing for granted, simply let it be demonstrated to you. See the local De Laval agent or address the nearest general office.

THE DE LAVAL SEPARATOR CO.

New York 165 Broadway — Chicago 29 East Madison Street — San Francisco 61 Beale Street

Dairying and Hog Raising

All letters regarding commercial and technical features of dairy farming and hog production promptly answered. Address all communications to Dairy Department, Western Farm Life, Denver, Colorado.

Far too often does the dairyman expect the impossible of a cow—that she can pick up enough dry grass in a day from the thin pasture of late summer to produce four gallons of milk.

The greatest asset of any breeder is a reputation. A reputation is built up by achievement, by the judicious use of advertising to tell the buying public of their success, and by honesty and fair dealing. It is a three-cornered proposition, and to knock out or remove any corner, means to undermine and destroy the entire structure.

Value of Testing Association.

Membership in a cow testing association will increase the value of your herd by $50 a head, says F. E. Ball, Deputy State Dairy Commissioner. He points out that this statement has been proved in Colorado many times. A purchaser is always ready to pay more for a tested animal because he knows what he is buying.

A cow testing association cheapens the feed bill because, by using the records, you are able to feed more economically by feeding according to known production, and by employing better methods of feeding.

A cow testing association increases production because you have an individual record of each cow in your herd and thus know the profit or loss on each cow. Also, you can keep the heifer calves from your highest producing cows sired by purebred bulls from well known blood lines. This information not only tells you what cows to dispose of, but how to feed the good cows.

In forming a cow testing association it is necessary to have about twenty-six dairy farmers in the organization. Together they can obtain the services of a tester to weigh and test the milk for each cow and keep the feed costs and production records. He will spend one day each month with each member.

New Colorado State Leader.

A new champion for Colorado has been announced by the Holstein-Friesian Association of America for the 365-day division of the junior two-year-old class. She is Columbine Korndyke Mondamin, owned by Spencer Penrose of Colorado Springs, Colo. She made 17,253.1 pounds of milk and 552.80 pounds of butterfat, equivalent to 691 pounds of butter.

She displaces by this record Columbine Pontiac Queen, also owned by Spencer Penrose, whose record is 17,981.3 pounds of milk and 538.46 pounds of butterfat, equivalent to 673.08 pounds of butter.

The state record of 365-day production over all ages is held by Dutchland Hengerveld Ascalon, owned by Hall Bros. of Denver, Colo., whose record is 26,485.2 pounds of milk and 1,010.45 pounds of butterfat, equivalent to 1,263.0 pounds of butter.

Pig Club Boys on Tour.

Twelve members of the Blue Ribbon Pig Club of Elbert with their friends and others interested in their work to the number of forty-nine recently made a tour, visiting the homes of the various members and other farms where good hogs are grown. The boys of this club purchased their gilts as little pigs a year ago. They grew them out, bred them and now half of them have pigs and the others will farrow soon. The average number of pigs farrowed to date was nine and the average number raised thus far is six. Dick Jay, extension livestock specialist of the Colorado Agricultural College, who made the tour with the boys, told them that they had developed a most excellent bunch of gilts and should be commended for the showing they had made.

At noon the boys were entertained at lunch at Valley Home Ranch. The women in the party had brought well-filled baskets and dinner was served in the large basement of the Janner home. Mrs. Janner served lemonade, coffee and ice cream made from the product of Jersey cows. The boys settled their dinners with a ball game and journeyed on to the McCubbin ranch, where Mr. Jay gave them a course in practice judging, pointing out that the pork producers must select breeding stock to conform to the market demands. The boys passed judgment on two groups of gilts, each giving in detail his reasons for placing them as he did. These boys will be given further practice in judging during the summer, their plan being to have a boys' judging team represent Elbert county at the State Fair in Pueblo.

The success of this club has largely been due to the faithful leadership of O. P. Phillips, who has taken a keen interest in the work of the boys from the start and has spent considerable time with them. The tour was planned by Mr. Phillips and County Agent A. W. Aicher. The members of this club are Ralph and Sharon Litherland, Leslie Cornforth, Cecil Draney, Floyd and Carl Phillips, Merl, Beryl and John Adams, Wesley Fickel, and Milton and Lloyd Philips.

LIVESTOCK NOTES.

As announced in our last issue, The Blue Ribbon Live Stock Co. of Pueblo will hold a registered bred sow Duroc sale on the State Fair Grounds, Pueblo, on September 12. Some of the best blood from this famous Duroc herd will be sold to the highest bidder on this date. This herd is too well known among western breeders to need comment, as it has been a high winner in Western shows for nearly twenty years, and has won honors also in other states, including the Nebraska State Fair and the National Swine Show, the greatest hog show in the world. Their advertisement will be found in the livestock advertising section of this issue.

THE BONVUE FARMS SALE.

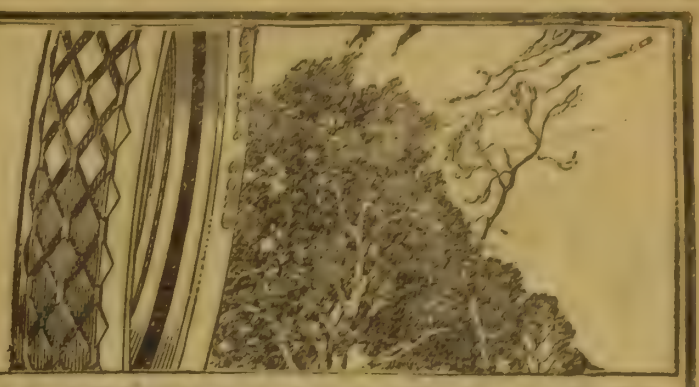
The Bonvue Farms will hold their second annual sale at their farm near Golden, October 14, 1922, where lovers of good Milking Shorthorns will have a chance to buy some of the choice cattle of this famous herd.

Included in the offering is Abigail, with an official record of nearly 9,000 pounds of milk in a year testing over 4 per cent.

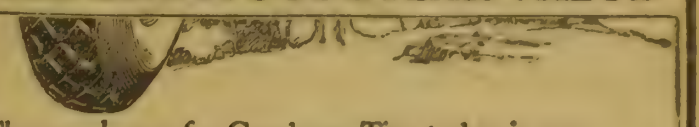
In the past two years the farm has placed more cows in the Record of Merit with class A official tests than any other herd in America. Cows are only milked twice daily and handled under regular farm conditions. More than 100 of the records are over 4.5 per cent.

Two of the highest testing daughters of Duke Glenrose sell—prize winners, one of them junior champion of the Denver show of 1920.

The dam of the new herd bull, Overbrook Ury 3rd, is a world record pure Scotch cow. Come to this sale if you want the best.—C. N. Henry, Fieldman.



THE MAXIMUM GOODYEAR VALUE



The purchase of a Goodyear Tire today is an investment in known quality.

What that quality is, has been proved by the public over a period of nearly a quarter of a century.

In that time, by uniformly fine performance, Goodyear Tires have attained unquestioned leadership.

More people ride on them than on any other kind.

Goodyear Tires never have been so good, never so serviceable, as they are now.

Veteran users say they give more than twice the mileage they did twelve years ago.

Yet Goodyear prices are at the lowest point in our history.

Never before has Goodyear value been so great.

Goodyear Means Good Wear

GOODYEAR

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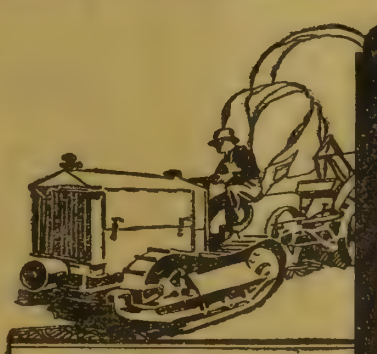
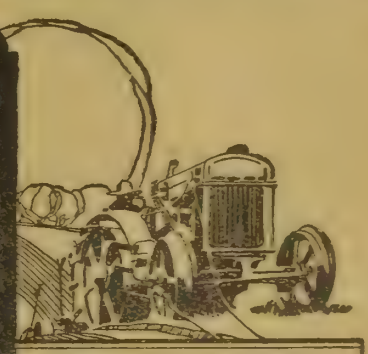
Club Raisers Wanted We want a Local Representative in every locality to take subscriptions for Western Farm Life. Profitable work for a little of your time. For sample copies and full particulars write WESTERN FARM LIFE, Denver, Colorado.



How Sure Are You that Your Tractor Oil Is Right



CLETRAC CASE 15-27

Motor:
Polarine
Heavy

Transmission:
Polarine
Transmission
Oil

Grease Cups:
Polarine
Tractor Grease

LUBRICATION ENGINEERS not only understand the motor of *your* tractor. They have covered the entire subject of tractor lubrication and oil supply. It is a part of their life's work.

Consequently, you can rely absolutely on the recommendations given in the Continental Tractor Lubrication Chart. And remember, there are fifty years of refining experience back of Polarine and Stanolind Tractor Oil. There are none better made.

Send for a copy of the chart today.

THE CONTINENTAL OIL COMPANY
(A Colorado Corporation)

Boise, Butte, Albuquerque — DENVER, Cheyenne — Pueblo, Great Falls, Salt Lake City

TRACTOR LUBRICATION

Motor:
Polarine
Heavy

Transmission:
Polarine
Transmission
Oil

Grease Cups:
Polarine
Tractor Grease

2400 telephone wires in a cable little larger than a man's wrist.

Science keeps down costs

When the Bell System installed its first successful telephone cable, fifty wires was the largest number that could be operated in a single cable without "cross-talk" and other interference. Today it would require 48 cables of the original type to accommodate the number of wires often operated in one cable.

Without this improvement in cable, the construction of new underground and aerial lines would have cost the Bell System upwards of a hundred million dollars more than has actually been spent. In addition, the cost of maintenance would have been greater by eighteen million dollars a year. These economies in the Bell System mean a saving in telephone rates to each individual subscriber.

In all branches of telephone practice science has similarly contributed to economy. Even in such a comparatively small item as switchboard cords, improvements have reduced the cost of renewal by four million dollars a year.

Every new telephone added to the Bell System increases the usefulness of *all* telephones, but this multiplication tends likewise to increase the complications and the expense of service. The scientists of the Bell System, to offset this tendency, are constantly called upon to develop new devices which simplify complications and keep down costs.

By virtue of a united system the benefits of these improvements are shared by all subscribers—and the nation is provided with the best and cheapest telephone service in the world.

"BELL SYSTEM"

AMERICAN TELEPHONE AND TELEGRAPH COMPANY

AND ASSOCIATED COMPANIES

One Policy, One System, Universal Service, and all directed toward Better Service

Profitable Farm Poultry

W. E. VAPLON.

Questions about the farm flock promptly answered by letter. Free advice on all phases of poultry production. Address all inquiries to Poultry Department, Western Farm Life, Denver, Colorado.

Beware of the pretty hen; she is likely to be a slacker. It is the ragged old bird that pays for her keep.

Poultry house perches in England are placed very differently from the plan followed in this country. Instead of running lengthwise of the house short six-foot perches extend out transversely from the rear. On these short perches only six to nine fowls can roost. The contention is that when the perches run the long way the hens are more likely to crowd each other.

Leghorns Return Good Profits.

A profit of $108.48 was returned for the year 1921 by a flock of 75 Brown Leghorns owned by Mrs. W. P. Link of Lincoln county. This was in addition to paying for an addition to the poultry house costing $67.72. Mrs. Link has been keeping accurate cost accounts on this flock and knows exactly what it has cost to feed them. The whole flock averaged 143 eggs each for the calendar year 1921.

The Hen House Floor.

There are many ideas as to the best types of floors for a poultry house. It is important that the floor be kept as dry as possible. On some types of floors moisture from the ground comes through the floor and evaporates on the surface. One of the best types of poultry house floors is one having a layer of gravel, cinders, or crushed rock which contains large air spaces, next a layer of hollow tile covered with a thin layer of cement. Another satisfactory floor can be constructed by placing a layer of tar paper on top of six or eight inches of crushed rock or gravel and finishing with a three-inch layer of concrete. Any type of floor should be kept well covered with litter during the winter months.

Controlling Poultry Diseases.

In dealing with poultry diseases preventive rather than curative measures should be depended upon. The flock that is well bred from the standpoint of vigor, is reasonably well fed and given a comfortable house, and run on land that is sodded or grows a crop each year, is not likely to give much difficulty from diseases. As a usual thing it will be found easiest and the least expensive to isolate individual ailing birds and except in the case of slight ailments which quickly recover, kill and burn them. Where one is so unfortunate as to have an epidemic make its appearance, the veterinarian should be called, or fowls that are just coming down with disease should be shipped to the State Experiment Station for examination and diagnosis.

Turkeys May Have Blackhead.

Despite the fact that I have an ideal place to raise turkeys and try so hard to succeed, they seem to get a yellow diarrhea when they are about six to eight weeks old and last only about a week and then die. What can I do for them?—Mrs. P., Utah.

Quite often young turkeys are weak and unable to withstand attacks of disease because the parent stock had not been well fed or cared for. Breeding stock should have free range where there is an ample supply of natural feed during the winter and early spring.

The yellow diarrhea is a symptom of blackhead. No positive cure for blackhead has been found. It is best to kill any bird that is very sick and burn the body. As a preventive, clean the roosting places and spread lime over the floor and roosts frequently. A disinfectant such as potassium permanganate should be kept in the drinking water, just enough to make the water a wine color. The feeding of sour milk is found to be of advantage in keeping the turkeys in good health and in reducing the activities of the organisms which cause blackhead.—P. C. Jamieson, Fort Collins, Colo.

State Egg-Laying Contest.

An official egg-laying contest under state supervision is to be conducted at Canon City, Colo., for a period of five years. This decision was made by the State Board of Agriculture at a recent meeting in Fort Collins. The Chamber of Commerce of Canon City offered to stand all expenses for buildings, land and equipment, if the College would pay the salaries of the necessary employes and be responsible for the proper management and control of the contests. Paul C. Jamieson of the Extension Service is working out the local details.

County Agent A. J. Taylor has developed considerable local interest in the poultry industry through the farm bureau and this interest is largely responsible for the local co-operation offered in putting on the contests. Canon City is well located for the purpose, being easily accessible from all the poultry-raising sections of the state. It is also located in the heart of one of the most extensive poultry raising districts of Colorado and a large portion of the population there is dependent, in part at least, upon that industry for a livelihood, so that the success of the enterprise is assured.

A permanent site will be equipped to accommodate about one thousand birds in entries of five to the pen. The College is to use the money received as entry fees and as returns from the eggs to aid in defraying the expenses.

Lice Kill Chickens In Warm Weather

Summer Months Most Dangerous, Says Poultry Authority — To Prevent Losses Add Minerals to The Fowls' Drinking Water.

If your chickens are sickly, won't lay and are dying off in hot weather, lice and mites are probably the cause. Dr. B. F. Kaupp, famous poultry authority, says: "Lice are most common in July and August. During these months conditions are more favorable for their propagation." To easily get rid of these pests and prevent losses, add minerals to the fowls' drinking water. This does away with greasing, dusting, spraying and dipping. Soon after the fowls drink the mineralized water all lice and mites leave them.

The necessary minerals can now be obtained in convenient tablets, known as Paratabs. They are scientifically prepared, perfectly safe, and dissolve readily. The tablets also act as a tonic conditioner and are warranted to impart no odor or flavor to eggs or meat. They are equally beneficial to young chicks and grown fowls. The health of the fowls improves, they grow faster, stand hot weather better, and the egg yield frequently is doubled. Mrs. M. N., Pulaski, Ky., says: "I am giving Paratab water to my chickens and am having better luck this year than ever before."

Any reader of this paper may try Paratabs without risk. They cost only a trifle and are sold under an absolute guarantee. Furthermore, the laboratories producing Paratabs are so confident of good results that to introduce them, they offer two big $1 packages for only $1. Send no money, just your name and address to the Paratab Laboratories, Dept. 895, 1100 Coca Cola Building, Kansas City, Mo., and the two $1 packages, enough for 100 gallons of water, will be mailed. On delivery pay the postman only $1 and postage. If not delighted with the results in 10 days, notify the laboratories and your money will be refunded in full. Don't hesitate to accept this test offer, as it is fully guaranteed.

POULTRY

LEGHORNS.

FOR SALE—WHITE LEGHORN HENS, SEVERAL hundred of our best breeders, to make room for young stock, $1 each. Riverside Poultry Farm, H. D. Walker & Sons, LaJunta, Colo.

BABY CHICKS.

QUALITY CHICKS—LEGHORNS, ANCONAS AND Large breed; $10 and $11 per 100. Fleda Jenkins, Jewell, Kan.

SEVERAL VARIETIES.

NINETY BREEDS—POULTRY, EGGS, PIGEONS, dogs, baby chicks, parrots, ferrets, hares. Complete free folder. Bergey's Poultry Farm, Telford, Pa.

TURKEYS.

INSTRUCTIONS ON RAISING TURKEYS—RIDding of lice, cureing Blackhead and cause of it. All for $1. Now is the time to buy some of these 20-pound Mammoth Bronze hens, while you can get them cheap. Sunnydale Poultry Farm, Keystone, Nebr.

HONEY.

"THEBESTO ROCKY MOUNTAIN HONEY," none better; satisfaction guaranteed or money back; five-pound can, postpaid $1.60. Send remittance with order. Write for price on large quantities. The Colorado Honey Producers Association, Denver, Colo.

MISCELLANEOUS.

LARIMER BOX AND BARREL CO.—BARRELS, kegs, fruit packages, baskets of all kinds. 1016 Larimer st. Main 7088. Denver, Colo.

PATENTS—BOOKLET FREE. HIGHEST REFerences. Best results. Promptness assured. Send model or drawing for examination and opinion. Watson E. Coleman, Patent Attorney, 624 F St., Washington, D. C.

LET US TAN YOUR HIDE—COW AND HORSE hides for fur coats and robes. Cow and steer hides into harness or sole leather. Catalog on request. We repair and remodel worn furs; estimates furnished. The Crosby Frisian Fur Co., Rochester, N. Y.

NURSES TRAINING SCHOOL—PARK AVE. HOSpital, Denver, Colo., offers a thorough training to young women desirous of becoming professional nurses. This is a fully accredited school. Course is three years. During training students receive full maintenance, tuition and all uniforms; also money allowance of $6 per month to cover other hospital needs. Apply Supt. of Nurses, Park Ave. and Humboldt Sts., Denver, Colo.

KODAK FINISHING.

KODAK FILMS DEVELOPED FREE. PRINTS 2½c each. Kodak Studio, Denison, Texas.

FARM MACHINERY.

BANKRUPT STOCK FARM MACHINERY, INcluding tractors, grain and bean threshers, at sacrifice on very liberal terms. J. H. Cain, 2615 Williams St. Denver. Phone York 9160-J.

CORN HARVESTER CUTS AND PILES ON HARvester or windrows. Man and horse cuts and shocks equal Corn Binder. Sold in every state. Only $25 with fodder tieing attachment. Testimonials and catalog free showing picture of harvester. Process Harvester Co., Salina, Kansas.

TOBACCO.

HOMESPUN CHEWING AND SMOKING TOBACco, 5 lbs., $1.25; 10 lbs., $2.50; 20 lbs., $4.50. Farmers' Union, Mayfield, Ky.

NATURAL LEAF TOBACCO—CHEWING, 5 pounds, $2, 10 pounds, $3. Smoking, 10 pounds, $2, postpaid. John T. Hay, Dresden, Tenn.

NATURAL LEAF TOBACCO—CHEWING, 5 LBS., $1.75; 15 lbs., $4. Smoking, 5 lbs., $1.25; 15 lbs., $3. Send no money, pay when received. Farmers' Tobacco Assn., Paducah, Ky.

TOBACCO—NATURAL LEAF CHEWING, 5 pounds, $1; 10 pounds, $2. Smoking, 10 pounds, $1.25; 20 pounds, $4. Send no money. Pay when received. Tobacco Growers' Union, Paducah, Ky.

KENTUCKY TOBACCO—3-YEAR-OLD LEAF—Don't send a penny, pay for tobacco and postage when received. Extra fine, chewing, 10 lbs., $2; smoking, 10 lbs., $2.50; medium smoking, 10 lbs., $1.75. Farmers' Union, Hawesville, Ky.

ARMY GOODS.

SALVAGE AND SURPLUS SALE OF ARMY goods. Post Army Store, 921 18th St., Denver, Colo. Write for price list.

SALVAGE AND SURPLUS SALE OF ARMY goods. Denver Army Store, 1443 Larimer st., Denver, Colo. Write for price list.

Science Discovers Greatest Lice Killer

Changes Old Methods—No Dusting or Spraying — Birds Delouse Themselves—Gives Lasting Relief.

A recent discovery promises to revolutionize all the methods accepted up to now for keeping poultry free from lice and mites. This wonderful lice killer keeps the birds always lice free without the poultry raiser doing any work. It is the simplest, easiest, surest and best method ever discovered.

Hick's Lice Kill, which is the name of this sensational lice killer, is added to the drinking water. The medicine taken into the system of the bird comes out through the pores and every louse or mite dies or leaves the body. It does not injure the hatchability or flavor of the eggs or meat; is harmless to chicks and does not affect the plumage. A few days treatment at the start and then a little in the drinking water each month.

A Trial Costs You Nothing

So confident is Mr. Hick that Hick's Lice Kill will kill every louse or mite, that he is making a special guaranteed offer of two regular full sized, double strength, $1.00 bottles and a regular $1.00 package of Hick's Egg-Lay Tablets all for $1.00. Use one bottle yourself and sell the other at one dollar, thus getting your own free. Send $1.00 today (currency, money order, check, etc.) to Chas. M. Hick & Co., Dept. 432, 1018 S. Wabash Ave., Chicago, Ill. If you prefer, send no money, just your name and address, and pay postman $1.00 and postage on delivery. If after 30 days trial you are not absolutely satisfied, write Mr. Hick and your money will be refunded.—Advt.

Farmers' and Stockmens' Exchange

Advertisements will be inserted in this department for 7c per word; four or more consecutive insertions, 5c a word each insertion. Remittances can be made by postoffice money order or personal check. Every figure and initial counts as one word. Guaranteed circulation 55,000 copies each issue. Send us a trial advertisement. Write for proof showing how these columns pay advertisers.

FARMS AND RANCHES

FOR SALE OR TRADE—100 ACRES, WHEAT and corn land, 7½ miles Haswell, Colo. Write Elmer Pearson, Haswell, Colo.

WANTED—TO HEAR FROM OWNER OF GOOD ranch for sale. State cash price, full particulars. D. F. Bush, Minneapolis, Minn.

I WANT FARMS AND LAND FOR CASH BUYers; will deal with owners only. R. A. McNown, 334 Wilkinson Bldg., Omaha, Neb.

SELL YOUR PROPERTY QUICKLY FOR CASH, no matter where located. Particulars free. Real Estate Salesman Co., Dept. 11, Lincoln, Neb.

WANT TO HEAR FROM OWNER HAVING FARM for sale. Give particulars and lowest price. John J. Black, 33rd Street, Chippewa Falls, Wis.

200 ACRES FOR RENT, SUITABLE FOR RAISing head lettuce; contracts to be let at once to renters for fencing and preparing this land for next year's crop. Jennie M. Mason, Box 25, Gunnison, Colo.

FIVE-ACRE ORCHARD, BEARING SEVERAL hundred bushels of apples and pears, for sale with or without fruit. In city limits; other city property for sale. Reasons for selling. P. H. Riley, Owner, Green River, Utah.

FARM FOR SALE—SEVENTY-THREE ACRES, irrigated, well improved, one and one-half miles from Mitchell, Neb., forty rod from Great Western Sugar Factory; excellent soil; under one of best irrigation ditches in Nebraska. Good feeding location. Price $15,000; will carry back half secured on farm. No trade considered. Write for particulars. Address R. E. Gifford, Mitchell, Neb.

$700 GETS 160 ACRES WITH 12 CATTLE, 24 hogs, crops, corn, hay, feed, poultry thrown in; big profits here, hogs, cattle, corn, general products; good markets, handy village; 75 acres rich lime tillage, wire-fenced pasture, about 1,000 cords wood; 70 apple and peach trees; good cottage, well shaded, 2 barns. Owner called away, $1,400 gets all, half cash. Details page 106 Illus. Catalog 1,200 Bargains Free. Strout Farm Agency, 831 BA, New York Life Bldg., Kansas City, Mo.

IRRIGATED FARMS NEAR DENVER—GOING TO California and will close out at very low price and easy terms, several improved farms under good ditches, 20 to 30 miles of Denver and near railroads.

142 acres, one mile to depot, elevator and beet dump, rural route and milk route by the door. All under ditch, good water right; new six-room house; barn and outbuildings; half in alfalfa, 10 acres pasture with running water, no seepage. Refused $250 per acre two years ago, but price now $140 per acre; $2,500 cash, balance easy terms. Possession this fall.

80 acres irrigated, 5-room house, barn, good well; half mile to school, 3½ miles to town; all level, all in crop; no waste; rural route and milk route by the door. Cheap pasture land with running water across road, can be rented cheap. Fine dairy proposition. Price $125 per acre; $1,500 cash, balance easy terms. Possession this fall.

Also 160 acres, 320 acres, 107 acres, 195 acres, all irrigated, for sale cheap. Chas. O. Elwood, Owner, 415 Ideal Bldg., Denver, Colo.

HELP WANTED

MEN — WOMEN WANTED — GOVERNMENT clerks and carriers, railway mail clerks, $1,600—$2,300. List positions free. Write Mokane, Dept. B-11, Denver, Colo.

AGENTS—100% SELLING FIBRE BROOMS; free sample. National Fibre Broom Co., St. Louis, Mo.

$210 MONTHLY, EXPENSES, FREE AUTO TO agents selling our poultry and stock remedies; fast summer sellers. Sunflower Poultry Farm, B. 10, Parsons, Kan.

AMBITIOUS MEN—WRITE TODAY FOR ATtractive proposition, selling subscriptions to America's most popular automobile and sportsman's magazines. Quick sales. Big profits. Pleasant work. Digest Publishing Co., 9659 Butler Bldg., Cincinnati, Ohio.

$50.00 WEEKLY—MEN, WOMEN, TAKE ORders for American Guaranteed Hosiery. All styles, colors for men, women, children. Silk hose guaranteed against runners. Experience unnecessary. Write today for territory and samples. American Hosiery Mills, Dayton, Ohio.

U. S. GOVERNMENT POSITIONS OPEN TO men—women over 17; $95 to $192 month. Quick, sure raise; steady work; no strikes; short hours; paid vacation. Common education sufficient; experience unnecessary. List positions free. Franklin Institute, Dept. G-123, Rochester, N. Y.

NO STRIKES IN AUTOMOTIVE BUSINESS, BUT steady work, high pay. Be an automotive electrician or mechanic. We train you thoroughly. Best school, finest equipment. Special proposition. Booklet free. New class starting. Johnson Automotive Trades School, Electrical-Mechanical, 729 Broadway, Dept. C.C., Denver.

LIVE STOCK

CATTLE.

RANGE BULLS—REGISTERED HEREFORDS and Shorthorns. The Lowell Purebred Cattle Co., Union Stock Yards, Denver.

WHY PAY MORE? PUREBRED REGISTERED Holstein heifer calves, $50. Circulars free. Condon's Holstein Parks, West Chester, Ohio.

FOR SALE—31 HEAD OF EXTRA GOOD REGistered Hereford heifers, all open, of breeding age, all with as Choice Anxiety 4th pedigrees as can be obtained anywhere. These are not tail-end cattle, but the pick of a good herd, and were all bred, and are now owned by one of the most prominent Colorado Hereford breeders; they have never been pampered, but are well grown, heavy boned, have lots of scale, and all the desirable qualities of the best Western Herefords. Only reason for selling is on account of dry season and lack of winter feed. This is a great opportunity to secure a foundation of the right sort of Herefords. Priced right, bred right. All right in every respect. For detailed information write Box 2H, Western Farm Life, Denver, Colo. Also, will sell about twenty head choice cows, proven dams, good ages, some of them dams of above described heifers, most of these cows will sell with calves at foot. Will be glad to furnish extended pedigrees on all these cattle to any one interested.

HOGS.

HIGH-CLASS REGISTERED DUROC BOARS BY Great Giant Sensation. Delbert Hawkins, Peetz, Colo.

SHEEP.

RAISE KARAKUL SHEEP, PRODUCING PERsian lamb Astrakhan fur. Two lambings yearly. Dr. Young, Hoff-Schroeder Cafeteria, Denver.

MILCH GOATS.

SWISS MILCH GOATS, HIGH-GRADE STOCK; milking from three to five quarts; also young stock. Frank Rauchfuss, R. D., Edgewater, Colo.

PET STOCK

FOR SALE—GUARANTEED ENGLISH SHEPherd pups, either sex. Also big type Poland China hogs; prices reasonable. Chris. Schultz, Ionia, Mo.

SEEDS

ALFALFA SEED, 95% PURE, $6 BUSHEL, sacks free, track Concordia. Geo. Bowman, Concordia, Kan.

KANRED SEED WHEAT, RECLEANED, $2.25 per bushel, sacked. Kanota oats, $1.25. Taylor & Sons, Chapman, Kan.

WHOLESALE SEED PRICES TO CONSUMER—Alfalfa, $10 per hundred; Red Clover, $18; Sweet Clover, $8; Timothy, $5; Grimm Alfalfa, $30; Kanred Seed Wheat, $3; Seed Rye, $3; sacks free. Order from ad, or write for samples. If seeds do not please you, and save you money, we will take them back and refund all of your money without argument. You run no risk in dealing with us. Order from this ad and save 25% on your fall seeding. M. C. Meier, Salina, Kan.

MISCELLANEOUS

HICKORY SPLITS, HAND MADE, ENOUGH SIX chairs, $1 postpaid. David Hardin, Patesville, Kentucky.

INVENTIONS WANTED—CASH OR ROYALTY for ideas. Adam Fisher Mfg. Co., 204, St. Louis, Mo.

ELBERTA PEACHES, RIPE ABOUT SEPT. 10, $1.50 per bu.; apples in October, $1 per bu., f. o. b. Lazear. John M. Taylor, Hotchkiss, Colo.

FARMERS' BAGS FOR GRAIN AND ALL OTHER purposes; reasonable price, quality guaranteed. Central Bag & Burlap Co., 1901 Market St., Denver, Colo. Phone Main 4516.

GUARANTEED BETTER BUTTER WRAPPERS—100, 60c; 250, $1.50; 500, $2.50; 1,000, $4.25, printed to order. Home Specialty Co., Middleton, Idaho.

SEND FOR OUR WHOLESALE WEEKLY PRICE lists; it will keep you posted on the rock-bottom prices, and will help you save from 25 to 40 per cent on your supplies. Stock Growers Wholesale Supply Co., 1523 19th St., P. O. Box 1442, Denver, Colo.

Additional Classified Page 14

POLLY *Sells in* PUBLIC SALE, October 14th, 1922.

SALE INCLUDES:

ROSE SHARON, 8884.4 lbs., 1st calf.

ABIGAIL, 8606.1 lbs., 2nd calf.

LADY WASHINGTON, 10,041.4 lbs.

Several cows exceeding 1,000 lbs. per month in tests now running. Many show-ring winners.

Two sons of Kirklevington's King, International Grand Champion.

Select young cows and bred heifers. A buyer can get a carload of The Right Kind.

TRUE "DOUBLE-DECKERS"
PROVED PRODUCTION.
BEST BREEDING.

Send today for Catalog.

BONVUE FARMS,

DENVER, COLORADO.

We have bred hundreds of prize-winning and high-producing Holstein cows, including

Tilly Alcartra

We can supply you with that same line of breeding. Write

McKAY BROS., Caddoa, Colo.

Blue Ribbon Duroc Sale

THE SALE YOU ARE LOOKING FOR

On Colorado State Fair Grounds,

PUEBLO, SEPTEMBER 12, 1922

35 Head of Registered Bred and Open Sows and Gilts

This is a chance to put Blue Ribbon Duroc blood in your herd at your own price, as many of these sows are a little thin, having to see spring litters. Some producers of show stock will sell.

SOME OF THE ATTRACTIONS:

1. A Blue Ribbon Sensation sow, the dam of our futurity litter. Open. Guaranteed a breeder.
2. A Taxpayer (Grand Champion, Rocky Ford) yearling, bred to Burke's Sensation I Am. Was Futurity winner last year.
3. The only daughter of Alfalfa Queen on the farm. Her dam sold in our 1919 sale for $190. Bred to Longview Orion King 2nd.
4. A "Terrible Ten" bred sow bred to Blue Ribbon Sensation.
5. A Burke's Sensation I Am yearling, bred to Longview Orion King 2nd. This is the best summer gilt we raised last year. A corker.

Others equally as good. We were the highest winners at Denver, 1922, on these blood lines. A few first-class registered farmers' type bred sows will sell. These will go cheap. Don't overlook them.

SEPTEMBER 12 WILL BE BLUE RIBBON DUROC DAY ON COLORADO STATE FAIR GROUNDS. REMEMBER THE DATE. SALE AT 1 O'CLOCK. WRITE TODAY FOR CATALOG, AND PLAN TO ATTEND.

Col. C. W. SNOOK, Greeley,
Col. G. L. COOPER, Pueblo, } Auctioneers.

C. N. HENRY, Fieldman for Western Farm Life.

BLUE RIBBON LIVE STOCK CO.

C. F. BURKE, Manager. Owners.

HAMPSHIRE HOGS

We make a specialty of furnishing foundation herds. We have Show and Herd Boar prospects for sale, that combine the blood of the greatest show hogs ever produced. LOOKOUTS, WICKWARES and TIPTONS, the three greatest strains known to the breed. For free booklet, prices and description write to

N. E. Mosher & Son, Hugo, Colo.

Mather's Big-Type Polands

sold to breeders in four states this year are giving satisfaction.

CHOICE YOUNG BOARS

at prices that will surprise you.

C. J. Mather, Longmont, Colo.

SPRING BOARS

Just a few real herd headers left ready to go at pre-war prices. Used with grade sows even, they will more than pay for themselves on the first crop of pigs. Write today.

C. C. Boyd, Yuma, Colo.

Livestock Auctioneer and Duroc Breeder.

BRAUER PUREBRED DUROC CO.

Colorado Springs, Colo.

We'll have a wonderful lot of spring pigs, especially boars, from the great hogs Woodferd Sensation, Highland King Defender, Colorado Chief Sensation, Golden Chief and other high-class boars. Satisfaction guaranteed.

J. W. BRAUER, Gen. Mgr.
22 Lorraine St. Colorado Springs, Colo.

HAMPSHIRES

We offer sows and gilts bred to a great son of an International Grand Champion. Also serviceable boar and weanlings, both sexes.

Prices and description on request.

D. C. FULLER & SON,
FIRST VIEW, COLO.

C. A. C. QUALITY STOCK.

In picking your Shorthorn breeding stock, remember

SNOW KING

breeding has proved itself in the show ring. Lord Douglas calves out of Snow King heifers are even better. We will have some bulls of this breeding for sale this summer.

COLORADO AGRICULTURAL COLLEGE,
Fort Collins, Colorado.

PRODUCTION

TYPE — SIZE

We offer you a wonderful amount of these Holstein qualities—and from a clean herd. Bull calves from fine record dams. Pahgre Valley Ranch, Loesch Bros., Montrose, Colo.

BREEDING

D. S. Polled Herefords

Cows from Polled Plato, herd headed by POLLED SUCCESS A 3rd. Young bulls and heifers for sale.

Smith Livestock Co.

CHIVINGTON, COLO.

Shorthorns That Milk

ARE MONEY MAKERS.

A herd that will give you a good monthly cash income is what you will need in the future. One of our young bulls from a Record of Merit cow can develop your herd into a dual-purpose paying proposition.

We know the war is over and have bulls for sale at prices that you farmers and ranchmen can afford to buy. Write for our bargain list and easy payment plan.

We also have several young bulls for sale, priced to sell.

THE PINE VALLEY
DAIRY & FARMS CO.

Seeley G. Rose, Mgr. Colorado Springs, Colo.

Bates Shorthorns

are the foundation blood of true Milking Shorthorns. We have them. A few bulls for sale.

THE CARPENTER CATTLE CO.
GREELEY, COLORADO

Buy MILKING SHORTHORNS

from the oldest established herd in the state.

We can supply your needs in bulls of beef type either horned or polled Shorthorns.

Write Superintendent for folder on breeding and prices.

State Industrial School,
Golden, Colo.

Buy a Calf Out of This Herd

Twenty cows in this herd on an official seven-day test averaged 440.13 lbs. of milk and 20.19 lbs. of butter.

COLORADO STATE HOME,
2305 S. Wash. St. Denver, Colo.

OUTSTANDING HOLSTEIN BULL

We have for sale a yearling son of a three-year-old heifer who made [illegible] butter last year and 21,428 lbs. [illegible] milk, in the world for butter production and ninth for milk for the year 1921-[illegible]. The bull was sired by a 30-lb. son of Johan Duchess De K[illegible] Lad, a bull who has two record [illegible] ters, and two world [illegible]. [illegible] mostly white and a beautiful individual.

WRITE FOR PRICE
WHICH IS REASONABLE.

Mrs. R. G. Douglas, Rush, Colo.

Look for DEPENDABILITY in the next tire you buy

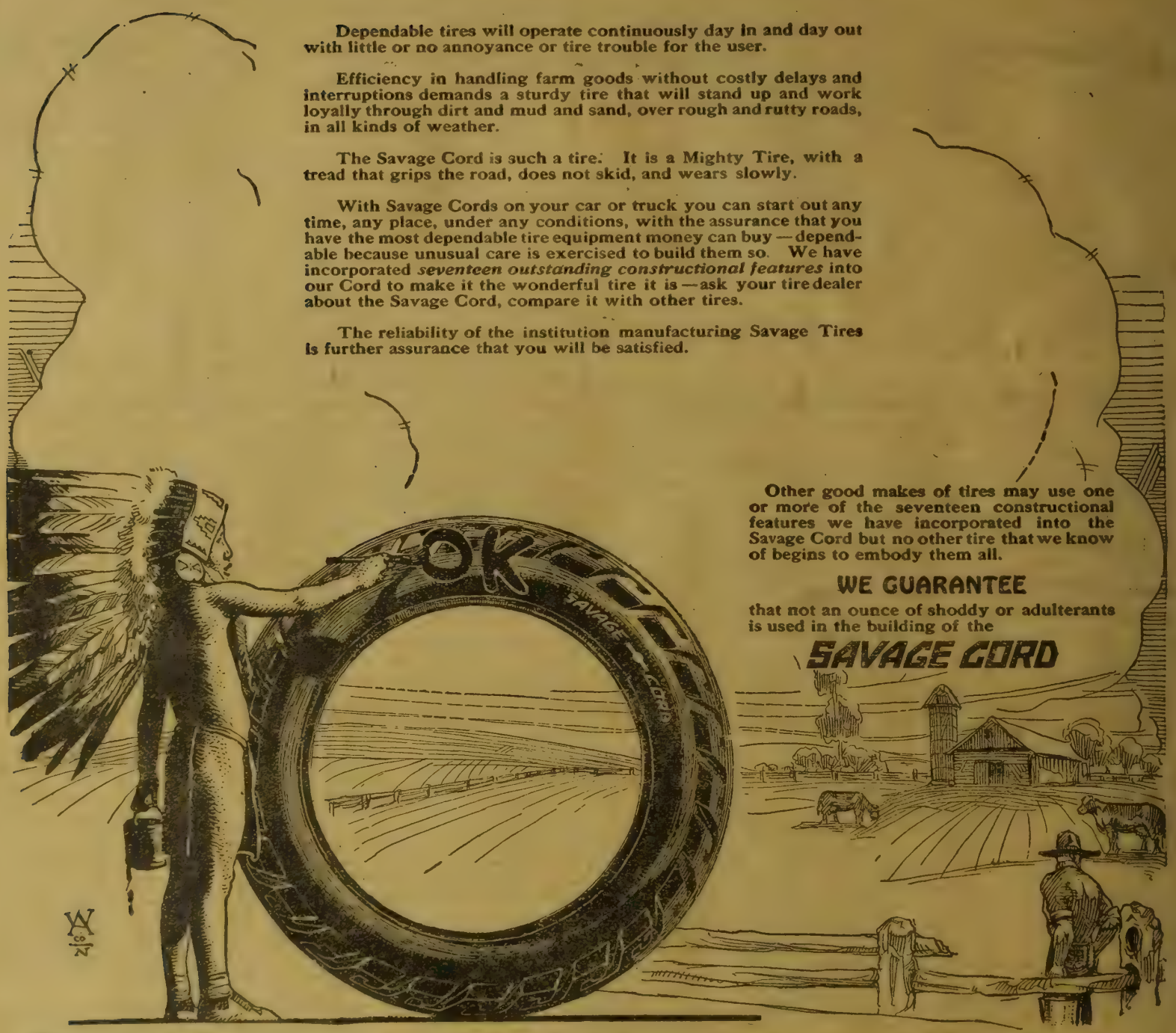
Dependable tires will operate continuously day in and day out with little or no annoyance or tire trouble for the user.

Efficiency in handling farm goods without costly delays and interruptions demands a sturdy tire that will stand up and work loyally through dirt and mud and sand, over rough and rutty roads, in all kinds of weather.

The Savage Cord is such a tire. It is a Mighty Tire, with a tread that grips the road, does not skid, and wears slowly.

With Savage Cords on your car or truck you can start out any time, any place, under any conditions, with the assurance that you have the most dependable tire equipment money can buy—dependable because unusual care is exercised to build them so. We have incorporated *seventeen outstanding constructional features* into our Cord to make it the wonderful tire it is—ask your tire dealer about the Savage Cord, compare it with other tires.

The reliability of the institution manufacturing Savage Tires is further assurance that you will be satisfied.



Other good makes of tires may use one or more of the seventeen constructional features we have incorporated into the Savage Cord but no other tire that we know of begins to embody them all.

WE GUARANTEE

that not an ounce of shoddy or adulterants is used in the building of the

SAVAGE CORD

THE SPRECKELS "SAVAGE" TIRE CO. SAN DIEGO, CALIFORNIA.

OUR BEST ASSET IS THE SATISFIED CUSTOMER

You Can Make Money Milling Flour

One of the best paying and most dignified business you can get into or put your boy in nowadays, is flour milling. On a comparatively small investment, and without any previous milling experience you can set up and run the wonderful "Midget" Marvel Mill and make good money from the start.

"Midget" Marvel

Self-Contained Roller Flour Mill

Saves the high freights on wheat out and flour and feed in. "The first eight months I made a net profit of over $1000." says A. H. Long, Jefferson, Kan.; "My profits from the 'Midget' averaged $4.00 a day per day." Chas. Stuckey, Cooper, Tex.; "We were in debt when I bought my 25 barrel 'Midget,' and the extra mill paid me clean out of the hole long before I bought my 50 barrel mill from you." M. A. Kaser, Oxford, Utah.

Capacities 1, 25, 50 and 100 barrels of as fine flour as any mill can make. Write for free book, "The Story of a Wonderful Flour Mill," trial offer, terms, etc.

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IN

New Serial Starts in This Issue, "The First American —Page 5

WESTERN Farm Life

Vol. XXIV. *Denver, Colo., September 15, 1922.* *Semi-Monthly*

COLORADO STATE FAIR, SEPTEMBER TWENTY -FIFTH TO THIRTIETH

Look for GREATER SATISFACTION from the next tire you buy

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OUR BEST ASSET IS THE SATISFIED CUSTOMER

What Can Be Learned by Keeping Farm Accounts.

While relatively few farmers had to worry much about income taxes this year, there has been a growing interest in farm accounts. From every state come detailed reports of work done in this line. In Kansas forty-nine counties report the distribution of 1,846 farm account books by request of interested farmers. Not all of the account keeping that was done was followed under direct supervision of extension specialists in farm management, but twenty-one of the county agents employed co-operatively by the United States Department of Agriculture and the State Agricultural College lent assistance to farmers. Accounts were interpreted and summarized for 285 farmers. In thirty-six counties 24,186 farm inventories were distributed, and in nine counties forty-four farmers made changes in their business as a result of keeping accounts.

Specialists working with the farm management extension department have obtained facts and figures on various types, classes of livestock, and other particulars on twenty-one farms in two counties. One of these men visited the farms on his list at intervals similar to those of a cow tester. Some of the results noted in connection with this work in Kansas are as follows:

The net cost of producing an acre of alfalfa in 1920 amounted to $23.17. This is the average obtained on a yield of 2.08 tons per acre on twenty-one farms, on which there were a total of 386.5 acres of alfalfa. The net cost per acre on corn was $28.26, or 64 cents a bushel. Twenty farms, including 903.68 acres, furnished this average. Oats averaged 36.7 bushels per acre, grown on sixteen farms which had a total acreage of 289.5 acres. The cost was $27.88 per acre, or 75 cents a bushel. Wheat cost $34.22 an acre, or $1.77 a bushel to produce on eighteen farms, planted with 894 acres of wheat averaging 19.3 bushels an acre. The net cost of 100 pounds of pork amounted to $13.08. The average cost of keeping one work horse for the year amounted to $159.36. This was found by averaging 140 horses on twenty-two different farms.

These were the figures for a particular locality. Those applying to other localities could be worked out by following similar methods of averaging if the farmers in any given district have kept their cost accounts in such a way that they can be utilized.

Judging Team From England.

The champion livestock judging team of the Junior Farmers' Clubs of England may visit the United States and the International Livestock Exposition this coming autumn, and compete with the winning boys' club team of the United States for international honors, according to an announcement just issued by G. L. Noble, secretary, National Committee Boys' and Girls' Club Work.

B. H. Heide, manager of the International Livestock Exposition and a director of the national committee on boys' and girls' club work, reports that the International Livestock Exposition will offer a trophy which will be presented to the winning team, should the invitation be accepted.

Boys' and girls' club work is now being carried on in eight different countries and it is hoped that the relationship which has been started will develop further international judging contests and competitions and an interchange of practical ideas in furthering the better practices of agriculture in the nations participating.

Improving Quality of Wool.

How to improve the quality of wool produced with a minimum of effort and expense was featured at a fleece weighing demonstration in Natrona county, Wyoming, conducted by J. A. Hill, extension wool specialist from the university of Wyoming. Mr. Hill pointed out that this improvement could be accomplished without the rigid culling and selling off of a great number of their sheep, if they would only divide their breeding ewes into two bunches, thus mating the very choicest ewes to their choicest rams for production of ewe lambs to keep, and breeding their poorer ewes to their inferior rams for market lambs. This manner of improvement seemed to meet with approval among the sheepmen and from all indications there will be several calls this fall for Mr. Hill's services in dividing up various flocks in this county.

Western Farm Life

A Western Magazine for Western Farmers and Stockmen

VOL. XXIV. DENVER, COLORADO, SEPTEMBER 15, 1922. No. 18.

All Roads Lead to Pueblo State Fair Week

SHOW TO EXCEED ANY PREVIOUS EXHIBITION OF STATE'S RESOURCES

By George C. Wheeler.

PREPARATIONS are nearing completion at Pueblo for the 1922 State Fair, which promises to be the biggest and best exhibition of the livestock, agricultural and industrial resources of the state ever staged. Each year has marked an increase in the number and quality of the exhibits shown and superintendents and officials in checking over the entries and applications for space find a notable increase in nearly every class and department over any previous fair. With this increase in the displays made in the various sections of the fair from year to year has come a greater interest in the exposition on the part of farmers and livestock producers all over the state. A pilgrimage to the big exposition at Pueblo is one of the outstanding events of the year.

This year's fair will open Monday, September 25 and continue through the week ending Saturday, September 30. A rate of one and one-third fare has been granted on all railroads for the round trip. Auto roads all over the state are in good condition, and Manager J. L. Beaman has promised the usual bright Indian summer weather for the last week of September. The automobile trip is becoming an increasingly popular means of journeying to the fair. Additional land has been added to the fair grounds which will provide ample space for camping and every convenience for the comfort and protection of campers has been provided.

Livestock entries have broken all records, in fact, one of the outstanding features of this year's State Fair will be the showing of purebred stock. The real noteworthy accomplishment of the fair is not so much in its increase in cash premiums or the promise of record attendance, as in the fact that this great show has contributed no little part in the development of our agricultural and livestock interests to the present high pitch. With this in mind we can readily understand why the state is becoming a leader in its purebred livestock herds of all kinds and why the State Fair is assuming a greater significance than the mere holding of a big farmer show each year.

Livestock Breaks All Records.

Every breed of livestock in the state will be represented this year by some of the most noteworthy animals ever bred and raised in the state. The horse show, the cattle barns, the sheep pens and the hog exhibit will crowd to the limit the space available. Among the exhibitors of Herefords are George W. Baker of Littleton; T. F. DeWitt, Denver; Jas. D. Canary, Littleton; the Ken Caryl Rench, Littleton; State Reformatory, Buena Vista; Wilbur E. Grant and L. C. Grant, both of Avondale. Shorthorn entries have been made by Pine Valley Farms Co., Colorado Springs; William Duncan, Yoder; D. W. L. and R. D. Warnock, Loveland, and the Colorado Agricultural College, Fort Collins. Two herds of Angus cattle will be shown, those of D. D. Barr & Son of Sanford, Colo., and R. R. Lucore & Sons of Arriba. P. C. Larsen of Wolbach, Neb., will show Red Polled cattle, and H. Croft, Anthony, Kan., Galloway.

The biggest showing of dairy cattle will be in the Holsteins. Eight herds are entered, including Spencer Penrose, Colorado Springs; John Kramer, Brighton; State Reformatory; Colorado Agricultural College; Ben F. Simpson, Denver; Casper Hoffman, Denver; Model Farm Dairy, Holly, and C. W. Henry, Greeley. The Agricultural College and A. M. McClenahan of Greeley will show Jerseys, and Guernseys will be shown by the Agricultural College and W. L. Stone & Son of Pueblo. An exhibit of Milking Shorthorns will be made by the Pine Valley Farms Company.

The hog show will far outclass any exhibition ever made. Many of the prize winners at Pueblo will go on to the National Swine Show at Peoria, Ill., in October. Among the Duroc Jersey herds entered are those of R. I. Love, Cascade, Colo.; T. C. Bradley, Fort Collins; Ora Ayers, Orleans, Neb.; H. C. Luther, Alma, Neb.; V. A. Briggs & Sons, Seward, Neb.; Lawrence Collins, Golden, Colo; Thomas & Davidson, Las Animas; Range View Stock Farm, Henderson; Agricultural College; State Reformatory; Kingsley Herd, Minden, Neb.; Ross R., F. D. and O. H. Crow, Rocky Ford; Blue Ribbon Stock Farm, Siloam; W. L. Stone & Son, Pueblo, and W. B. Moran, Heartwell, Neb. Poland Chinas will be shown by G. U. Yearous and E. E. Johnson of Fort Morgan; Mountain View Farm, West Lake; W. S. Hill & Son, La Porte; Fletcher Brothers, Lamar; Clark & Pratt, Beaver Crossing, Neb.; Edward Webb, Longmont; the Agricultural College; A. D. McGillvray, Boulder; John Johannsen, Minden, Neb.; T. F. Simpson, Manzanola; C. W. Henry, Greeley, and J. J. Hotzel, Boone. T. F. Rockey of Saguache and M. & F. Ball of Pierce will make the Chester White show. Hampshire entries have been made by John T. Morrison, Sterling; D. D. Prouse and Thomas Brothers, Las Animas, and G. F. Fink, Fort Lupton. The only Berkshire entries are those of C. W. Henry of Greeley.

Twenty-seven Counties Exhibit.

For some years there has been competition between counties on a general county display of farm products, for which a silver loving cup and other prizes have been offered. At first only three or four counties competed, but last year there was a spurt, with six or eight in the contest, and now this has suddenly been expanded into a state-wide competition with twenty-seven agricultural counties entered. The county extension agents are largely responsible for the interest that is being taken in these displays, which not only properly portray the advantages of a county from the standpoint of production, but are educational in character. Logan county, which has long been the chief contender for the county cup, will have to go strong this year to stay in the top class, as there will be real competition to meet.

The United States Department of Agriculture will have elaborate exhibits illustrating various activities in which the Department is engaged in furthering the educational idea in agriculture.

Agricultural College to Be Represented.

Colorado Agricultural College will be represented at the State Fair through the usual encampment of Boys' and Girls' Clubs, under direction of Miss Maude Sheridan, State Club Leader. Present indications are that the encampment will be the biggest and best in the history of club work in Colorado. County champions are going to Pueblo from all parts of the state, in Pig, Corn, Poultry, Potato, Canning, Radio and Sewing clubs and other lines of work. An especially strong Pig Club show is being arranged and many of the club members will also show their hogs in the regular classes at the fair.

Plans are being made for a systematic showing of the fair and the city of Pueblo to the boys and girls. Guides are being appointed to take charge of tours which will include the livestock and agricultural exhibits, and the points of interest in Pueblo, including the steel mills, the object being to give the fair more of an educational value to the young people than has been the case in the past.

The Agricultural College will have no general exhibit at the fair, all efforts being concentrated on the club encampment, which is considered the strongest demonstration of what is being accomplished through extension work that could well be provided. The young people who belong to these farm and home making clubs are being trained along practical lines to remain in rural communities, and the State Fair is the annual round-up for the work, county winners receiving the trop to Pueblo as a reward for work well done.

There is a movement on foot to provide more adequate accommodations for the young people, dormitories being needed for housing the boys and girls and their chaperons. Governor Shoup will be a guest of the encampment for luncheon one day during the fair and other state officials also are expected on that occasion.

There will be exhibits from foreign countries, notably the Canadian government, which will not enter competition, but will illustrate the agricultural resources of western Canadian provinces.

Big Display of Fruit.

The fruit display wlil be the biggest that Pueblo has seen, if the horticultural division has sized up the situation accurately. The fruit crop is unusually large on the Western Slope as well as in other districts, and the quality is excellent, hence the prospects for fine exhibits both in the horticultural district displays and in the individual classes.

The Colorado State Game and Fish department will make an elaborate showing of its varied activities in the propagation and protection of fish and game.

There will be a Better Babies show, an annual fair feature which is growing in interest and value year by year. As in former years, Friday will be children's day and on this day all the teachers and all the pupils of public and private schools in the state will be supplied with free tickets good for that day, September 29.

A new department will be that of Shetland, Hackney, Welsh and all classes of educated and trick horses. This will be of special interest to the boys and girls.

Machinery Exhibits Big Feature.

Farm Power Day is another new feature. The machinery exhibit will be the biggest and best of its kind ever put on in Colorado, and farm machinery, implements and tractors of many makes and types will be on display under power, so that visitors may see "the wheels go round." Manufacturers from all over the country are entering machinery in this division, which will be one of the fair's strong features. Not all persons are mechanically minded and one might think that such would have no interest in machinery displays, but no one is lacking in interest in anything which will bring increased profit, or relief from drudgery in the performance of necessary work. All are interested in machinery from this standpoint and this will be one of the most popular sections of the big exhibition. There have been a lot of new things in machinery in recent years, more than in any other time in the past ten years.

Stimulated by the interest in this feature of the fair from out-of-the-state manufacturers, Colorado manufacturers are coming to the front with immense exhibits and demonstrations. There will be a real machinery display at Pueblo this year. Manager Beamon is estimating that the space devoted to this section will be three times that of any previous fair.

In amusement lines there will be strong features including a racing program, (Turn to Page 17)

This new livestock building, 240 by 270 feet, was dedicated at the 1921 State Fair.

Will Wheat Prices Be Higher During Coming Months?

EUROPE'S ESTIMATED NEEDS 100,000,000 BUSHELS ABOVE LAST YEAR

Gilbert Gusler.

WILL the surplus wheat in the principal exporting countries be sufficient to meet the needs of the importing nations in the next twelve months? The conventional remark that "World conditions establish wheat prices" implies that this ratio between the supply of surplus wheat and the demand for it by importers determines the world level of wheat values which sets the prices at terminal markets and then on back to the country elevator, mill or loading station.

Under normal conditions the average level of wheat prices during the spring months may be enough higher than during the heavy movement after harvest when much is sold direct from the threshing machine to pay the cost of extra handling, interest, and to cover shrinkage in weight and possibly more. However, when a farmer puts wheat in his bin to hold it for a higher market at a distant date in the hope of a large increase in returns, he is putting his faith primarily in this "world's situation."

Other factors enter in, of course. A country may over-export in the early part of its crop year, as Argentina did in 1920 with the result that wheat prices rose high enough to attract imports, or a shortage of box cars may cause artificial scarcity at central markets while abundance exists in the country, as happened in the United States early in 1920. A widespread holding policy, such as occurred following the sharp drop in wheat prices two years ago could have a similar effect while it lasted. The general drift of commodity values, whether toward a higher or a lower level, is another factor to consider, although it seldom is of great importance within a single year.

Wheat Requirements of World.

The central question, whether the importing nations will be able to find enough wheat to supply their needs in the next ten or eleven months, is far from simple and opinions are not unanimous. It involves knowledge of innumerable factors, practically every one of which is an estimate and subject to change upon receipt of later data.

It involves the outcome of crops which are still in the lap of Providence. Final returns are not yet in on our own winter and spring wheat. Some of the acreage in Canada and in Northern Europe is still subject to damage—by frost if nothing else—and the crops of Argentina and Australia just emerging from the winter season and to be harvested from November to January must be taken into the reckoning. Finally, the crop now being planted in India will be ripe next April and a part of any surplus from it can reach Europe before the European harvest in 1923 is started.

Estimates are at variance as to just how much wheat the importing countries will need. European crop reporting systems are woefully inadequate, so that official estimates have not been made in many important countries and those which have been made public lag two to four weeks behind the actual facts which are changing constantly with the weather.

The available material as assembled from a variety of sources, including comprehensive private foreign crop reports, point to a yield per acre about equal to or slightly below the average, whereas last year's crop was above the average. The loss compared with last year appears to be about one bushel per acre in European countries, which usually have a joint acreage of about 100,000,000 acres. In addition there is a slightly smaller acreage than last year. These conditions point to a total yield in the chief importing area of 100,000,000 bushels less than that of last year, with a possibility of even greater loss. This means that if all other conditions remain the same, import requirements will be increased 100,000,000 bushels over the preceding twelve months.

European Consumption Increasing.

An analysis made by the Department of Commerce shows that wheat consumption in central and western Europe fell off sharply in the early years of the war, but that it has increased rather steadily from 1,200,000,000 bushels in 1917 to 2,850,000,000 bushels in 1921, when it was still about 150,000,000 bushels below the pre-war normal. If another increase in consumption occurs in the present year it will necessitate a further addition to the amount which must be imported.

But there are counter influences. Oriental countries which were heavy importers last year have better crops and are not expected to take so much this year. Russia, which has been an importer in the last twelve months, is expected to take care of its own needs, although recent reports have been rather pessimistic. Europe substitutes rye for wheat, and the rye acreage is larger than a year ago both in Europe and North America. Last and most important, is the European pocketbook, which may not permit the purchase of all the wheat needed. Germany, Austria, Italy and France, all could use large quantities of outside wheat, but their finances are in a deplorable state and are apt to be the limiting factor. Under the circumstances a further increase in per capita consumption looks doubtful, especially since the use of substitutes is already being extended.

Summarizing the situation, the conditions as outlined point to some increase in import needs. This may be estimated conservatively at 50,000,000 to 75,000,000 bushels. Last year world imports were approximately 645,000,000 bushels. If the increase indicated above occurs it will mean 700,000,000 to 725,000,000 bushels for the present year. Broomhall apparently expects greater limitation due to financial conditions and places the "effective demand" from importers at 656,000,000 to 672,000,000 bushels.

So much for the demand. To supply it, reliance must be placed in the surpluses of the United States, Canada, Argentina, Australia and India, with small amounts from the Balkans.

Surplus Wheat of World.

This year's crop in the United States and the carryover of old wheat makes a total supply about the same as a year ago, so that if domestic consumption is not larger than last year there should be about the same amount for export in the year ending July 1, 1922, when net imports were approximately 263,000,000 bushels. But last year's crop is believed to have been underestimated. Using average domestic disappearance in the last seven or eight years, our exportable surplus from this year's supply would be only about 215,000,000 bushels. This latter seems to be the more reasonable figure.

Canada has the second largest crop on record, present prospects indicating a yield of about 345,000,000 bushels, which means an exportable surplus of 255,000,000 bushels.

So far as Argentina, Australia and India are concerned it is necessary to assume average crops, since they are now some distance from maturity and even the acreage has not been reported upon. Conditions as a whole in those countries are fairly favorable, however, so that the assumption looks safe.

The average crop in India in the last seven years has been about 325,000,000 bushels in round numbers, of which approximately 25,000,000 bushels have been exported. Argentina has raised 165,000,000 bushels, and exported 100,000,000 bushels, while the Australian crop has averaged 105,000,000 bushels with 60,000,000 bushels sold abroad.

The combined export surplus from the five countries for the present year, as arrived at in this way, amounts to 655,00,000 bushels. In addition, a small amount may be available from Roumania and Bulgaria in the Balkan region. Those countries exported about 6,000,000 bushels last year and reports indicate that they may do better this year. Manchuria and Siberia are expected to furnish some wheat to other Oriental countries. Altogether the exportable surplus from the harvests in the 1922-1923 crop year add up to about 675,000,000 bushels. This is slightly less than the estimated import requirements.

If importing countries take the full amount credited to them and the exportable surpluses do not exceed the foregoing estimates, then the difference must be made up by cutting into the carryover at the end of the crop year.

Carryover Below Normal.

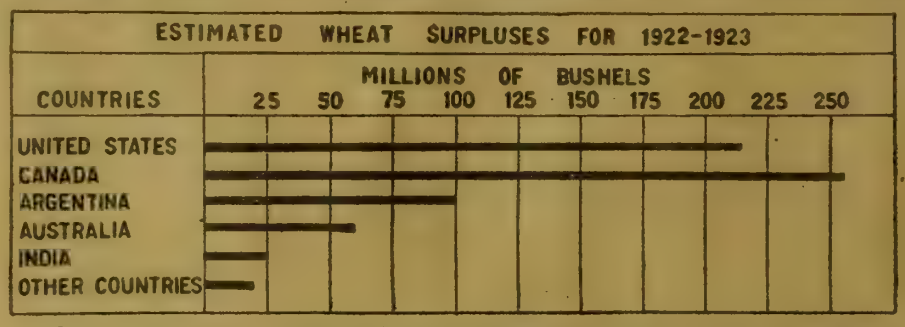
There is always some old wheat on hand in all countries when the new harvest starts. A few producers hang on and there is enough in distributive channels to keep the stream moving. A careful analysis shows that the carryover or remaining exportable surplus on July 1 this year in the five chief exporting countries, was approximately 170,000,000 bushels, compared with an average of about 177,000,000 bushels. The figures for this year, however, include an allowance of 25,000,000 bushels in India, which has prohibited exports, and 40,000,000 bushels in Argentina and Australia, which is larger than most estimates, so that the total carryover or surplus of old wheat after all may be only 130,000,000 to 140,000,000 bushels. If it develops that a further reduction is to be made in the coming year it means a strong statistical situation which should maintain a fairly satisfactory price level.

Trend Toward Higher Level.

So far as the local influences go, a severe car shortage which is certain to occur this fall, will help to sustain the market to the extent that it prevents farmers from selling. Furthermore, the general trend of prices seems to be toward a higher rather than a lower level. This factor can't be counted upon for much help, however.

It must be understood that this analysis is tentative which is the best that ever can be done at this time of the year. The crop estimates for Canada and the United States are most dependable, but even they are subject to change, and the amount needed for home use is another variable. Crops in the Southern Hemisphere may exceed or fall below the average, and the world outlook will be changed accordingly.

A still longer view is not so hopeful for the wheat grower. Russia was formerly the chief exporter, but her place has been taken by expanded production in other countries. Last year even India sent practically no wheat abroad, and the Balkan states only shipped about one-tenth of the amount they exported annually before the war. But North America, Argentina and Australia were able to meet the import needs of the world. Eventually Russia will come back, the Balkans will return to normal production, and India will be in the exporting game at least in a small way. When these conditions arrive, either a lower world price level or decreased production in North America and the Southern Hemisphere is in prospect.



Latest crop figures were used in computing the surplus for the United States and Canada, while for Argentina, Australia and India the figures show merely the average of recent years. The total is 675,000,000 bushels. The requirements of importing countries to absorb this surplus are invariably estimated at from 655,000,000 to 725,000,000 bushels.

Choosing One's Life Work

SHOULD BOY FROM THE FARM GO TO COLLEGE TO STUDY AGRICULTURE?

F. D. FARRELL,
Kansas State Agricultural College.

EVERY man while growing up passes through many periods in which he plans his future career. At one time he is to be a circus performer; another time a prize fighter or a chauffeur. In most cases these plans are based on a passing fancy. Many a young man after he is grown and has gone away to college bases his life plan on considerations no more solid than those on which, as a boy, he planned to be a pirate or a highwayman.

Opportunities in Agriculture.

To the farm boy the question often comes are the opportunities in agriculture sufficient to justify him in choosing this field for his life's work. In seeking an answer to this question he should realize that agriculture is more nearly indispensable than any other branch of industrial activity. It produces nothing but necessities. No civilized person can free himself from dependence on it. It is America's greatest business.

For more than a generation the people of the United States have been building up a great system of agricultural education. The foundation of the system is the agricultural colleges and experiment stations. These institutions are directly responsible for much of the progress of American agriculture during the past twenty-five years.

It is important to remember, too, that the pioneer days of American agriculture have passed; that muscular strength alone no longer suffices the farmer; and that the use of brain as well as brawn, of science as well as physical strength, becomes more necessary in agriculture each year. The work of the agricultural experiment stations during the past thirty-five years has built up a body of scientific information on which practical education in agriculture is now based.

Investigations which have been made in many of the states, including Kansas, Missouri, New York and Ohio, show that agricultural graduates find their college training financially profitable to them in their farming operations. This result is the only one which can reasonably be expected. The steel industry, the packing business, transportation, the fertilizer business and many other grat industries have found it profitable to utilize science in their enterprises.

Capable Leaders in Demand.

It is generally recognized that American agriculture is insufficiently supplied with high class leaders. Capable agricultural leaders are needed on the farms, in the farm organizations, local, state and national, in the creameries, seed houses, mills and scores of other places where agricultural service is involved. The experience of all successful organizations constantly emphasizes the indispensability of trained leaders.

College training in agriculture is designed largely to develop agricultural efficiency and the qualities of leadership and to help men to live richer lives and be better citizens. Efficiency and leadership are two of the best paying things in the world. Good living and good citizenship are two of the most desirable things.

These qualities are developed among college students in agriculture, and this fact is the justification for going to college to study agriculture.

The First American

By ALBERT PAYSON TERHUNE

A NOVEL
In Eleven Chapters.

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Drawing by J. E. LeSueur.

I found myself on my knees before her, there on the cold floor, kissing the white little hands that were somehow not withdrawn from my longing grasp * * *

CHAPTER I.

The Little Gray Man.

HE WAS such a gray little wisp of a man! But he hopped in and out, back and forth, as nimbly as a wildcat. And he swung that great sword of his like a veteran.

This was my first view of him as I cantered around the curve of the Auteuil byroad and came upon the fight. There were four of them attacking him. Agile as he was, the fray could have lasted but a moment or so longer.

I had come upon them unobserved in the clash and confusion. So I was able to ride down one of the assailants and bestow a hearty kick on the shoulder of a second, which sent him sprawling.

The four (cheap footpads, from their dress and bearing) probably thought me the forerunner of a party of horsemen. For, scrambling to their feet, they made off at top speed, over ditch and fence; plunging into the nearby woods.

A tame enough adventure, forsooth! I scarce glanced after them, but turned my attention to the little gray man.

"You are not hurt, I trust?" began I. "Did you——"

I got no further. He was leaping up and down in helpless fury.

"After them!" he croaked, his weak voice shrilling dryly like a katydid. "After them, fool! You are mounted. Cannot you see they are escaping? After them!"

"Why?" I asked carelessly. "They had not yet robbed you. Nor do you seem wounded. Let them go. It is no affair of mine!"

"After them! I command it!" he snarled tugging at my bridle reins and pointing toward the fast-vanishing ruffians as one might set a dog after a hare.

That so shabby and insignificant a creature should dare to "command" me, seemed somehow a rare jest. I laughed outright. Between his lowered lids he eyed me with the cold fury of a rattlesnake. It was less this malevolent glare than the fact of his being old, weak, and evidently poor that checked my laughter.

"I crave your forgiveness," said I. "I am a Provincial, and, therefore, perhaps boorish. I did but laugh to think how easily you defended yourself against four larger men and how wildly they fled."

His withered face cleared a little. He made as though to sheathe his sword, and his series of fierce leaps and twists relaxed.

Then, before either of us could speak again, a fit of coughing racked him to the very heart. He swayed, helpless, under the paroxysm.

I sprang from my horse and caught him just as he was falling. The lean, feeble, shrunken body lay as a child's weight in my big arms. The nervous excitement over, the little gray man was utterly exhausted.

I bore him to the roadside, and forced between his ashy lips the neck of my flask. A gulp or two, and he opened those strange eyes of his.

"'The spirit — is willing — but the flesh is — weak!'" he mumbled incoherently. "'I am become as a pelican in the wilderness and as an owl that is in the desert!"

Much I marveled at his muttering of scriptural texts. But in an instant a sharp quiver ran through the wasted body. He shook himself free of my supporting grasp and stood erect. The feeble frame was once more the willing slave of an iron will.

"Where is my rascal with the horses?" he snapped peevishly. "I bade him remain within call. If he does not return presently I must e'en borrow that huge horse of yours for my journey to Malmaison."

"My friend," said I, a little tired of his dictatorial ways, and resenting his utter lack of gratitude for my aid, "I am not a horsetrader, and yonder charger of mine is not for hire. I myself am on my way to Paris. If it will serve you, I am willing to take you up on the saddle behind me and carry you so far as our two roads join. Shall we start?"

He paused in the task of readjusting his shabby, disarranged clothes and peered at me suspiciously.

"Who are you?" he demanded.

"My name is Mallock," quoth I. "Hugh Mallock. I——"

"Mallock!" he croaked, catching me up sharply. "That is an English name. Yet you speak French with no English accent. How comes it that——"

"I am neither French nor English," I made answer. "I am an American."

"An American?" he echoed, puzzled. "I do not understand."

"It is not needful that you should," I retorted, nettled at his air of incredulity. "Yet it is the truth."

"Tut! Tut!" he remonstrated with pettish impatience. "That is no fit reply. Because I live in civilized France do you think me a booby who knows naught of the rest of the world? The two Americas are a howling wilderness peopled with red savages. Those natives are the only Americans. You are not red—though tanned more deeply than we French."

"Nevertheless," I returned stoutly, "I am an American. I was born in the Virginias. Save for one mysterious girl—Virginia Dare—I doubt me I was the first white child ever born there. I am——"

"You overrate my ignorance," he smiled, as one correcting a stupid pupil. "The Virginias had no permanent white settlement until 1609. Twenty-three years ago. And you must be close on 30."

"I was born there," said I, "in 1603. My father, Sir Hugh Mallock, an English baronet, was driven from home by Queen Elizabeth's injustice. With his young French wife he fled to the Americas, foreswearing allegiance to his ungrateful country, and living among the savages. There I was born. There, from my mother, I learned French. Even as from my father I learned English, and from our red neighbors the Pamunkey tongue."

"Then," he persisted, still regarding me with vexed condescension and speaking as one who could not readily bear to be contradicted, "you are of Anglo-French stock. Not American."

"My father's foes are my foe," I maintained. "When he foreswore allegiance to Europe, he did so for me as well."

"You are content then, to be a man without a country?" he sneered.

"No. I am a man from the largest, richest country on earth. And I am proud of it. Today, I am perhaps the only living man who styles himself 'American.' But I believe the time will come when it will be a title of high honor."

"Then why stray from your barbarous land, if——"

"When my mother died, my father and I made journey from the Floridas to Canada, trading, fighting, learning. I have met the French of Ontario, the Puritans of Massachusetts Bay, the Dutch of New Amsterdam and of the two Jerseys. From my father I learned swordsmanship and the customs of gentlefolk, along with my good education. Also, with him I amassed wealth. When he died last year I resolved to visit the lands whereof he and my mother had so oft spoken. I landed in France two days ago. At Paris I——"

"Ho!" cried the little gray man, who had scarce paid the tribute of a thought to the latter part of my tale, "here at last is Gervais with the horses! I have delayed too long. Adieu!"

He hurried forward to meet a fat, ill-clad lackey, who riding one bony nag and leading another, rounded the road-curve toward us.

"One moment!" I intervened, catching up to the bustling gray figure at a single long stride. "In my savage home it is a quaint wilderness custom to speak at least a single word of thanks to those who chance to save our lives and our valuables. Unless my ears be dulled by the long sea voyage, you have as yet spoken no such word. Perhaps, though, the customs of thankfulness and courtesy have not yet been adopted in France."

He turned on me with the snarl of an angry cat, and shook loose my grip from his shoulder.

"I thank you!" he growled.

"Your cringing gratitude well-nigh unmans me," I answered, monstrous polite and bowing low.

Without turning his head or even waiting for the groom's aid, the little gray man scrambled into the saddle, stuck both heels into his mount's thin ribs, and galloped off in a most desperate hurry.

He seemed to be insane with fear and in hot haste to be away. While he and I had talked, he had been cool enough. But from the instant the horses had appeared, offering a chance of escape, he had been as one possessed with panic dread; mad and eagerness to leave the scene of his late adventure.

It was at if he feared to meet with other foes at the same spot.

I watched him thunder down the road, the skirts of his loose gray surtout flapping wildly, fantastically, at every stride. One bound of the horse over a boulder in the ill-paved by-road, sent the coat-skirts flying well-nigh up to the rider's ears.

It did more. It turned the skirt-pockets upside down. From one of those pockets fluttered a bit of paper and something that glittered like a blaze of sunbeams.

"Ho!" I roared after the rider, "You have lost something!"

I ran forward to pick up the fallen articles. But the little man in gray did not hear me—or, hearing, he did not catch the import of the words. For he kept on, the groom at his heels, and soon was out of sight.

I reached the spot where the paper and the glittering object had dropped. There, in a roadside rut, half buried in fluffy dust, lay a jewelled snuff box.

I picked it up, marveling. For, though in the Americas snuff-taking was already a fixed habit, and though Master Raleigh had introduced it into England many years earlier, it had not yet gained any high favor in France. And a snuff-box so richly made was a rarity anywhere.

The surface was of chased, finely wrought gold. On the top of the lid was a strange hieroglyphic or monogram of diamonds. The edge of the box was set with alternating uncut rubies and emeralds. In the heart of the queer central emblem flashed a huge sapphire.

The box, at lowest computation, must have cost a full 30,000 francs. If the little gray man were in the habit of carrying such a wealth about him, in his threadbare clothes, I did not wonder that he had been beset by footpads. No, nor that he had seemed suspicious of every one and had been in mad haste to get safely to his destination at Malmaison.

I moved across the road to where the fluttering slip of paper had become caught in a wild rose bush. It might afford some clew to the owner's identity; so that I might find him and restore the treasure.

It was a single small sheet of soiled parchment. On one side, in the center of the page was written:

MARIAMNE

Tragedy in Three Acts

That was all. Evidently the fly-leaf of a manuscript drama.

Now, as all folk of that day knew, scriveners were an ill-paid lot. Whether they scribbled plays or romance tales, or histories, or rimes, their reward at most was scanty.

I had indeed, in England, heard how one Master Will Shakespeare, best paid of all British play-writers of his time, had skimped along on a bare starvation pittance until his dramatic dialogues had chanced to please Queen Elizabeth by their flattery of her own imaginary charms.

And Master Villon, here in France, had been forced to pick pockets to eke out his literary earnings.

How then, could a scrivener possess a snuff-box worth 30,000 frances? The little gray man's badly worn dress and hungry aspect were far more in keeping with the slip of paper than with the jeweled bauble.

It was long since I had touched snuff. And, while I was never addicted to the habit, yet I was curious to know what sort of tobacco products found their way to France. I touched the box's ruby-headed spring. And the lid flew back with a snap.

Whether the snuff were of best or worst quality, I know not. I scarce glanced at it. For, as I opened the box, my eyes fell on the (Turn to Page 10)

Basic Nature of Agriculture Must Be Recognized

MEYER URGES BETTER FINANCING OF ORDERLY MARKETING AND LIVESTOCK.

HOW best to maintain our agriculture upon a sound basis was the one guiding thought in the investigation into the agricultural and livestock conditions of the country by Eugene Meyer, Jr., managing director of the War Finance Corporation. In his report to the President, Mr. Meyer pointed out that this problem lies at the very foundation of our national economic and social policies, and every intelligent citizen must have a deep interest in its solution. Already the results of this investigation, as brought out by the comprehensive report made by Mr. Meyer, are beginning to be apparent in the attitude of Congress and the general public toward this great basic industry.

Need More Livestock Loan Companies.

"An important result of the work of the War Finance Corporation," said Mr. Meyer, "has been the formation of a number of new livestock loan companies, each with substantial capital subscribed by local business men, stockmen and bankers. The capital of these new companies, all of which has been subscribed during the last six months, exceeds in the aggregate the total amount of capital invested in all the livestock loan companies that existed previous to October 1, 1921. And whereas most of the capital of the former companies was concentrated in a few places—principally in Chicago, Kansas City, and Omaha—the new companies are largely owned and managed locally in the various livestock growing states. These institutions will not only serve present emergency needs, but they should add to the permanent structure of livestock financing for all time. Through them, as well as through other financing organizations, the War Finance Corporation has made loans aggregating approximately $73,000,000 for livestock purposes.

"In referring particularly to these new companies, there is no intention to minimize the importance of the older companies. They have had a difficult time during the past two years and their stockholders have furnished millions of dollars to maintain their solvency and stability. By so doing, they have prevented disaster to the livestock industry and to the banking institutions interested in it.

Livestock Financing Methods.

"After a careful study of the whole problem, in the light of the experience of the War Finance Corporation, I recommend the enactment of legislation specifically authorizing the organization of institutions to rediscount the paper of livestock loan companies. These institutions, of course, should be related to the existing financial structure and made an adjunct thereto; and, as a condition precedent to their functioning, a system for the more adequate supervision and inspection of the livestock which furnishes security for the paper should be devised and put into operation. The importance of this matter in any plan for livestock financing can not be over-emphasized.

"With such institutions and with a satisfactory system of inspection and supervision, I feel that capital in adequate amounts and upon reasonable terms may be looked for by the stockmen of our vast country. The new livestock loan companies may constitute the nucleus upon which the proposed rediscounting organizations can be developed on a sound basis and in a way that would reasonably meet the financial needs of the livestock industry.

Co-Operative Marketing Sound Policy.

"While the War Finance Corporation during the past year has entered into agreements to lend approximately $63,000,000 to co-operative marketing associations in all parts of the country, to assist them in the orderly marketing of their products, in most cases only a small part of the credit authorized has actually been used, because the local banks have been able to take care of the needs to a greater extent than had been anticipated. This indicates that the co-operative marketing associations, when they are properly organized and soundly managed, are able, for the most part, to obtain the necessary funds from local banking sources. But it is generally agreed that a good deal of the willingness of the banks to finance the co-operatives in their sections has been based upon the ability of the co-operatives to obtain funds from the War Finance Corporation. This has involved, in part, the element of confidence and, in part, the funds themselves; for it is obviously easier for a local bank to furnish funds to a co-operative marketing organization when it knows that the funds can be borrowed from another source and repaid to the bank in case of need. There is, therefore, a feeling among the managers of the marketing co-operatives, and also to a great extent among their banks, that there should be a continuation of the assurance of a market for their paper outside of the local banks. It is recognized that, with improving financial and agricultural conditions, it will be easier for them to obtain funds during the coming season, but, on the other hand, their operations perhaps will be conducted on a more extended scale and, therefore, the aggregate of funds required will be correspondingly greater.

"While in the West, I had the opportunity of meeting the directors and managers of many co-operative marketing associations, and in some cases of visiting their working headquarters and their warehouses. California was the first state to take up co-operative marketing on a large scale in this country and there it has been carried on in its most highly developed form. In San Francisco I met the representatives of twenty-six of the leading co-operative marketing associations of the state and was enabled to get the benefit of their experience and views. These California associations, for the most part, are so well established that their banking credit is equal to that of the best privately owned and managed corporations, and although they market products aggregating in value $250,000,000 annually, they have had occasion to avail themselves of the funds of the War Finance Corporation to the extent of only $1,500,000 during the past season. Their operations were financed almost entirely through their usual banking connections.

Financing Orderly Marketing.

"The more recently organized co-operative marketing associations in Oklahoma, Mississippi, Arkansas, Texas, Arizona, and in the northwestern states, while not so firmly established as the California associations, appear to be organized upon sound principles and to be properly and capably managed.

"Prior to the war, the distribution of our agricultural products, in so far as our export trade was concerned, was financed in considerable part by European capital. But fluctuating exchange, added to the fact that European countries are no longer on a gold basis, or even on a stabilized exchange basis, has prevented the continuation of this practice. We must, therefore, adjust our own financing machinery to meet the new conditions.

"Our financial system has apparently been based on the expectation that the farmer would sell his crops as soon as they matured. And the immediate sale of the season's product by the farmer contemplated its being carried by middlemen until distributed through manufacturers or retailers. As has been stated so often, the farmer's crop is harvested within a short period and consumed throughout the year. The processes of financing should adjust themselves to the natural processes of production and distribution rather than vice versa. We have reached the point where the right of the co-operative marketing organizations to carry the products of their members for ordely marketing, until the consumer is ready to take them, must be recognized and the necessary financing machinery provided.

Must Recognize Co-Operative Marketing.

"I, therefore, recommend that the need for the orderly marketing of our agricultural products in a more gradual way and over a longer period of time be frankly recognized; that existing banking laws and regulations be adjusted with this end in view; and that a rediscount facility be established to make it possible at all times for co-operative marketing organizations to obtain adequate funds for their operations. I recommend also that the powers of the Federal Reserve Banks be extended to include the purchase in the open markets of eligible paper secured by nonperishable agricultural commodities, properly warehoused.

"Perhaps I should add here that the need of additional financing not only for the co-operative marketing organizations but for the livestock industry as well was indicated in the report to Congress by the Joint Commission of Agricultural Inquiry.

"In conclusion, I suggest that, pending the enactment of legislation along the lines I have indicated and the establishment of the necessary machinery for its administration, the period during which the War Finance Corporation may make loans be extended until January 1, 1923, and that the Corporation be authorized up to that date to make advances upon adequate security to co-operative marketing organizations and livestock loan companies where it appears that they are unable to obtain adequate financing at reasonable rates through other channels; and to make advances to banking institutions on agricultural and livestock paper in exceptional cases and where it appears that the public interests will be served by such action."

Livestock Industry Poorly Financed.

THE livestock industry constitutes one of our great basic activities and involves a turn-over of an enormous aggregate amount, but, in my opinion, it has never been properly financed from two points of view.

In the first place, the financing has not been timed to the requirements of the turn-over. The business of fattening livestock, which involves a turn-over of six months, more or less, can easily be taken care of by existing machinery. But the longer time requirements of the livestock breeding industry, involving a turn-over of about three years, have been financed through loan companies, which, selling their paper for a maximum of six months, have been compelled to limit their loans to a similar period. A six months' loan to the owner of a breeding herd, with no assurance of extension, is a hardship to the industry and cannot fail to exercise a discouraging influence.

In the second place, there is need for a radical revision in the methods of handling the supervision and inspection of livestock loans. The ability of the industry to obtain adequate financing at reasonable rates inevitably must depend upon the elimination of some of the unnecessary hazards which have characterized the conduct of the business in the past.—Eugene Meyer, Jr.

Market Outlook for Farm and Ranch Products

PRIME STEERS REACH NEW HIGH LEVEL OF $11.25 AT CHICAGO

Edited by Glenn G. Hays.

FREQUENT predictions on the market page of higher prices on prime beeves have been verified right along. Values reached a new top of $11.25 at Chicago last week. On the western markets baby beeves are more numerous than a few weeks ago, so that heavy cattle are commanding a moderate premium.

There is a scarcity of finished steers, but receipts of other grades are abundant enough to make the total supply above the average for the corresponding period of the year. Combined receipts at seven leading markets since January 1 total 6,034,000 head, compared with a seven-year average during the same season of 5,897,000 head. Although total supply figures do not suggest scarcity, the western range movement is running considerably behind that of last year. Present arrivals from that section show desirable finish and are increasing the competition which short-feds must encounter. Southwestern pastures are disgorging and shipments from Kansas, since the grass season started, have been larger than in the corresponding period of last year, in line with the larger movement of thin cattle into that section last spring.

Dressed trade is holding up well on the better grades of beef, but the outlets for the product of common and medium steers will be filled to capacity most of the time in the next three months. Under the circumstances it is improbable that plain steers, cows and heifers will show any sustained strength before cold weather. Prime and choice steers are not believed to be numerous in feed lots, so that these grades will remain in a strong position, although the present price level appears to have largely discounted the situation.

Feeder Buyers Continue Active.

Combined shipments of stocker and feeder cattle from the twelve leading markets in the five weeks ending August 26 were 400,683 head, compared with 303,110 head in the corresponding period a year ago and 215,004 head two years ago. Both of the latter years, however, were below normal, so that the amount of increase shown this year is not as great as it first appears.

A few feeders are buying fleshy steers for a short turn before the present price level on prime and choice grades disappears. Bulk of the inquiry, however, is for steers in ordinary flesh. A moderate demand exists also for the light weights which cornbelt specialists in recent years have found profitable because of low initial cost. When carefully selected to avoid those that have been stunted and a heavy grain ration used, satisfactory gains and finish have been obtained. (Turn to Page 20)

Short-Term Loans to Farmers.

Lack of short-term credit facilities is holding back many farmers from efficiently handling their operations. Working out the solution to this problem is necessary if agriculture is to take its proper position as the basic industry of the nation.

Since its organization in 1917, the Federal Land Bank System has rendered a great service to agriculture. The Federal Land Banks have loaned nearly a half billion dollars to farmers on long-time, easy-payment mortgages at interest rates of 5½ and 6 per cent. This has benefited not only the farmers who have received the loans, but it has also benefited every farmer who has taken out a mortgage. Interest rates have been steadied and terms improved wherever money is loaned on farm mortgages.

It is now proposed that the Federal Farm Loan Act be so revised as to provide for the establishment of a department in each Federal Land Bank which would extend loans to farmers on notes for periods of from six months to three years. Such notes would be used as the basis for the issue of a special series of bonds.

Members of the Federal Farm Loan Board who have had practical experience in agricultural credit matters feel that it is to the best interest of all concerned that the two forms of credit be kept entirely distinct.

Judge Chas. E. Lobdell, Federal Farm Loan Commissioner, says: "Personal credits and farm loans are entirely different propositions. The two classes of credits must be extended on a different basis. A man trained and qualified to handle farm loans may have no capacity whatever for dealing with personal credits. The supply of funds in either instance must come from the investing public, and the type of investor who buys Federal Farm Loan Bonds, based on mortgages, is not likely to be attracted to a debenture based on chattel mortgages. The market for securities would have to be found in different quarters. Above all, the knowledge that the Federal Land Bank was putting out a debenture based on chattel mortgages would, it seems to me, have a most unfortunate effect on the buyers of Federal Farm Loan Bonds, even though the liability was so segregated that the chattel mortgage would not, as a matter of fact, impair the security of the Federal Farm Loan bond.

"The Federal Farm LIoan system has its distinctive field and its distinctive functions, and to keep it operating successfully and progressively is a task big enough for one organization."

This does not mean that no provision should be made for short-time loans especially suited to the farmer's needs, Far from it. But it does mean that in the opinion of those who should know, the short-term credit system should be kept entirely distinct from the Federal Farm Loan System which is already successfully doing the work which it was intended to do.

That some provision should be made for loans running from six months to three years is universally admitted by all who have studied the problem. During the past year, this work has been successfully done by the War Finance Corporation which loaned, upon an average, more than one million dollars a day for agricultural purposes during the year 1921.

The War Finance Corporation was created to meet an emergency and will automatically be dissolved when its charter expires—within less than one year. A bill is already before Congress which, if passed, would provide for a similar permanent organization. In several states, notably in New York and Wisconsin, private enterprise has met the local need. In New York state, the Farmers Fund, Inc., has for a number of years loaned large sums to farmers for periods up to one year. Similar organizations could be established in every important agricultural state.

Grange Stands for Character Building.

The Grange is not in existence solely for the purpose of teaching us how to raise the best crop of potatoes, corn or wheat, says the Colorado Granger, but it is also intended to help us broaden our minds, cultivate our intellicts and understand the fundamental principles underlying good citizenship; in short, to "elevate the character and increase the influence" of all who join our ranks.

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Let's Go to the State Fair.

A good fair, whether local, state, or interstate, is a most important factor in contributing to the improvement of agricultural conditions. Fairs and expositions have long been exponents of agricultural and social progress. A big fair properly conducted and in full harmony with the citizens of a state can accomplish great results along these lines.

The fair season is now on in Colorado and the "big show" of them all is the State Fair at Pueblo the week of September 25 to 30. This comprehensive demonstration of agricultural progress and achievement deserves the patronage of the citizens of the state. You cannot afford to stay away from this big fair. You will miss a splendid opportunity for inspiration and uplift if you do not attend.

A big fair such as will be staged at Pueblo brings out the best agricultural products of the state and in livestock from several states. It serves as a place to demonstrate all the various forms of agricultural production and progress in related activities.

As an educational institution and a place for recreation the State Fair is in a class by itself. At no other place can you see and study so comprehensively the progress that has been made in livestock development. New ideals in livestock form and production will be established in the minds of those who attend and this means progress. Animals at home will be judged by higher standards and the scrubs and inferior individuals will be given their proper rating as a result of study of such livestock as will be on exhibition at Pueblo.

Manufacturers of farm and home equipment go to great expense to show their wares. Demonstrations will be given and every effort possible will be put forth to show fair visitors exactly what the different machines will do to save labor and add to the comfort and convenience of farm and home.

In attending a fair so big and comprehensive as the State Fair you cannot expect to see everything that will be shown. If you go with the idea that you must hurriedly see everything you will not profit as much as you would if you made your plans beforehand and spend your time in carefully studying the exhibits and departments in which you are most interested. It will help you if you will take a note book along and jot down things to which you can refer later. Memory is too treacherous to be trusted.

Our big fairs are now conducted on a high plane. Public opinion is more and more insisting on that kind of a fair. Ideals in fair management have been greatly raised in recent years. Our fairs as now conducted reflect real agricultural progress. Why not get your share of the benefits by attending your own State Fair which must be recognized as one of the valued educational institutions of the state?

Farmers' Feeling Toward Industrial Disputes

The attitude of farmers toward the trouble between capital and labor was well set forth by Secretary of Agriculture Wallace in an address delivered before an audience of farmers in Virginia recently. He quoted numerous statistics on prices of products and the purchasing power of the farmer's and the laboring man's dollar, which showed that the wages of the farmer as represented by the prices paid for his crops are lower than his wages were before the war, measured in purchasing power, while the wages of the workman, and especially in organized industries, are considerably higher than they were before the war, whether measured in dollars and cents or in purchasing power. "The purchasing power of the wages of the railway employe in 1921," said Secretary Wallace, "was 51 per cent greater than in 1913. The purchasing power of the wages of the coal miner in 1921 was 30 per cent greater than in 1913. The purchasing power of the farm hand who works for wages in 1921 was 4 per cent less than 1913, while the purchasing power of the farmer himself was, on an average, from 25 to 45 per cent less than in 1913.

"In short, the farmers of the country, numbering almost one-third of our entire population, have borne altogether the heaviest burden of deflation. They have endeavored to get relief by all lawful means. They have appealed to the administration, to Congress and to every other agency which they thought might be able to help them, but while making these efforts to avoid their heavy losses they have not struck. They have not created disorders. They have kept on producing and in the fact of extraordinarily low prices have this year grown one of the largest crops in our entire history. The farmer believes in law and order. He believes in government. He believes in fairness between man and man. He believes in working hard and producing efficiently.

"If other groups would do as the farmer has done, our economic troubles would soon be over. Prices would soon be adjusted to their normal relationships. There would be work for everybody and at just wages.

"But there are too many people who seem to be thinking only of themselves and how they can profit at the expense of the community at large, and especially at the expense of the farmer. The farmer is sick and tired of this sort of business. He is disgusted with these recurring disputes between capital and labor, especially as connected with the essential industries. He sees no reason why such disputes cannot and should not be settled in an orderly and lawful way and without the interruptions of service which cost him so dearly.

"The farmer recognizes his obligation to produce food, for people must eat to live. He demands that both the owners of the coal mines and the coal miners recognize their equal obligation to produce coal, and he demands that the management of the railroads and the railroad workmen recognize also their equal obligation to keep trains moving, for unless the food he produces is moved promptly to market the people will starve.

"If the various groups in this country are determined to prey upon one another and abandon law and order for strong-arm methods, the farmer can take care of himself. He can reduce his production to his own needs. He can follow the example of some others and refuse to sell what he produces. But he does not believe in that sort of thing. He knows that such a policy would bring about in this great republic exactly the same sort of conditions that exist in Russia.

"The farmer calls upon capital and labor to cease their petty bickerings and resume production, trusting to American institutions and the American sense of fair play to see that justice is done to both of them."

Kanred Wheat High in Gluten.

Discrimination against Kanred wheat has sometimes been attempted on the ground that it is lower in gluten or protein than other hard wheats. Colorado growers of this high producing hard winter wheat will be interested in knowing that tests made at the Kansas Experiment Station disprove this charge. In fact, the tests made with samples of Kanred, Clark's Blackhull and Turkey red wheat, show Kanred slightly higher in protein. The difference was small, but enough to show that growers of the Kanred need not fear any reduction in the protein from growing this variety. The tests were reported by S. C. Salmon and P. L. Mann of the Kansas station.

Seventy samples in all from eastern and central Kansas were included in the tests. In each case the Kanred came from the same field from which the other samples were taken and the preparation of the ground, time and rate of seeding, time of harvesting and other cultural treatments were identical. The eight Kanred samples from eastern Kansas averaged 11.7 per cent protein and the eight samples of Blackhull, 11.71 per cent. The average protein content of the eighteen Kanred samples from central Kansas was 12.39 per cent, as compared with an average of 11.78 for Turkey and 11.77 for Blackhull.

Child or Guinea Pig.

The anti-vivisection bill which will have a place on the ballot in Colorado this fall by the initiated method, while purporting to be a humanitarian measure, is virtually an effort to abolish scientifis medical practice and research. Three Denver women circulated the petition asking that this bill abolishing animal research be initiated in Colorado. It is easy to get petitions of any kind signed. As an experiment a petition, in which the word "Holiday" in large letters appeared, was circulated among the students of the St. John's Military school at Salina, Kan. Fifty students signed and later found that they had asked to be beheaded and that the holiday was to be granted for this purpose. Many who signed the petition for placing this bill on the ballot signed just as blindly. The opportunity to correct the mistake is to vote intelligently at the general election.

Attempts have been made in other states to get such a bill on the statutes, but no state has seen fit to pass such a law. On another page of this issue is a statement relative to what would happen in the livestock business if this bill becomes a law. These are purely material considerations, however, as compared with what it would mean to human health and welfare. If this bill should become a law the advance of scientific medicine would cease, and more, it would go backward, for it would be illegal to manufacture diphtheria anti-toxin, smallpox vaccine and numerous other similar protective agencies. There could be no further research in cancer or tuberculosis, nothing could be done to combat insanity and the new Psychopathic hospital which has just been authorized would be useless. There is so much of absolute falsehood in the propaganda being circulated in support of this measure that we would urge our readers to thoroughly inform themselves before voting as blindly as did many in signing the petitions. The fullest of information can be obtained by addressing the Colorado Association for the Protection of Public Health, Imperial building, Denver, Colo.

Co-Operate in Livestock Improvement.

"Trade is holding up well on better grades of beef, but the outlets for the product of common to medium steers will be filled to capacity most of the time for the next three months." This is a quotation from the Market Outlook article in this issue. It should furnish food for thought to the producer of beef cattle. Quality will count more and more in the livestock business, and the men with the nerve and good judgment to keep improving their herds will profit in the long run. The market stock from the best herds will be of better quality and will bring better prices. It will cost no more to feed and finish this class of animals than the inferior ones.

Buying a high-class breeding sire is not all there is to livestock improvement. We recall an incident which came to our attention of two neighbors owning and using a good purebred bull for several years and during that time not making the slightest improvement in their breeding herds. It was a lamentable fact that these men had failed to realize the value of this purebred sire in improving their herds. It was evident that they had held the dollar so close to the eye as to obscure the future and had sold every good heifer and found themselves with only the original cows to constitute the breeding herd.

There is no way whereby improvement in a breeding herd can be brought about more rapidly and economically than by using a purebred bull of good individuality and breeding. Farmers can co-operate in owning such a sire just as these two men did, and by using good judgment in selecting the females saved for breeding purposes, bring about a remarkable improvement in their cattle and at a cost per man so low that we do not see how anyone can consider using a "scrub" sire.

The secret of quickly building up a valuable herd of high quality is the use of good purebred sires. The sire is half the herd in any case, and in the beginning his influence may be counted as considerably more than half if he is good enough. A single cross with a really high-class sire will make more progress in one generation than can be brought about in several generations where ordinary animals are used.

If you cannot afford to do it alone, get acquainted with your neighbors and work out a plan whereby it can be done co-operatively. The first step in every co-operative enterprise is the bringing about of perfect confidence between the parties wishing to co-operate. A group of men cannot co-operate successfully until they know and understand each other thoroughly. Many co-operative schemes fail because this fact is not recognized.

There is a rural problem in every community that is worthy of the best efforts of the best people in the community to solve.

From the Nation's Capital

TARIFF DUTIES ON MANUFACTURED GOODS RAISED TO UNHEARD-OF HEIGHTS.

E. E. Reynolds.

CONGRESSMEN and senators are confronted with the task of looking after the affairs of government and repairing their political fences back home at the same time.

Conferees on the tariff bill are working over-time in an effort to reach an agreement. They expect to have the bill ready for the Senate and House by September 15 or 20, and administration leaders are promising that it will become a law by October 1.

While the farmers were successful in getting about everything they asked for in the tariff bill, the farm organization leaders are discovering that they were somewhat modest in their demands, as tariff duties on manufactured goods are raised to unheard-of heights.

Gray Silver, Washington representative of the American Farm Bureau Federation, points out that the highest authorization above manufacturing costs heretofore allowed was one and a quarter to one and a half billion dollars, while the grand total of the pending bill shows an authorization of $4,800,000,000. In other words, industry is authorized to collect, if it can, more than 5 per cent upon the eighty-odd billions invested in agriculture. "I realize," he says, "that this cannot be collected except under most favorable trade relations. However, if this is to be used as a skimmer to gather what cream agriculture may have or as a means of gathering any fat we may have, whether it be much or little, it is something for each farmer to consider."

—x—

Senate Passes Soldier Bonus Bill.—The soldiers' bonus bill has passed the Senate by a vote of 47 to 22. As ten senators were paired against the bill and two of the seven not voting are opposed to it, there are not enough votes in evidence to carry the bill over the presidential veto.

It is estimated that the bonus bill will cost the government nearly four billion dollars. It becomes effective January 1, 1923. It provides adjusted service pay of $1 a day for domestic service and $1.25 a day for foreign service, less the $60 paid at discharge, with a limit of $500 for domestic service and $625 for overseas service.

There are optional provisions which permit the ex-service man to receive adjusted service certificates payable in twenty years, or sooner at death; vocational training, or aid in the purchase of a home or farm.

A senate amendment provides for the payment of the bonus with interest on foreign indebtedness to the United States, but if the interest charges are not sufficient to meet the appropriation the necessary funds are to be paid out of the treasury.

—x—

Reclamation Bill Rider to Bonus Act.—The McNary arid land reclamation bill in the form of an amendment was also annexed to the soldiers' bonus bill. This was a shrewd move on the part of the western senators to get favorable action on the McNary bill. The only relation it has to the bonus is a clause providing that ex-service men have preference in employment on irrigation projects, and that they have a sixty-day option to make entry for homesteads in every opening or sale of public lands by the Secretary of the Interior. They are required to pay for the land without further government aid, on the same terms as other homesteaders.

An appropriation of $350,000,000 is made to carry out this provision in the bill.

—x—

Secretary Wallace Urges Passage of Grain Futures Control Act.—The Tincher-Capper grain futures control bill has been reported out by the Senate Agriculture Committee. The bill aims to correct the provisions in the present law that failed to meet the approval of the Supreme Court of the United States.

The definition of "interstate commerce" in the new bill is identical with the definition in the packers and stockyards act of 1921, except for such changes as are necessary to make it applicable to grain.

Secretary of Agriculture Wallace has written a letter in which he says: "The more quickly this bill becomes a law and is in full force the more assuring it will be to the country at large. The exchanges will have no difficulty in meeting the requirements of the law with a month's notice. They have had experience under the former act."

The committee report says that the fluctuations in prices which have occurred since the court held the regulatory features of the future trading act unconstitutional have strengthened the farmer in his belief that prices have been manipulated to his disadvantage. From May to August, 1922, the price of wheat declined more than 40 cents a bushel, notwithstanding a world statistical position indicating that consumptive requirements will be in excess of available supplies and a large part of the exportable surplus of the United States has already been sold.

"The producer has a right to know and to not be compelled to rely solely on the bare assertions of the exchanges whether there is manipulation of the price of the grain he grows, and what are the active causes of the extreme and unanticipated fluctuations in prices. There is an urgent demand for Federal supervision of the boards of trade."

That the low price at which wheat is now selling is not due to a large surplus of last year's crop is indicated by Department of Agriculture figures which show that the total wheat carryover on August 1 was far below the quantity on hand at the same date in 1921 and 1920.

—x—

Distribution of Surplus War Road Material Considered.—A strong effort is being made by the govetrnors of the different states to secure the enactment of a bill introduced by Senator Townsend of Michigan to distribute surplus war road building material valued at $1,000,000,000 among the states. This war material would be turned over to the states on a basis of population.

It is claimed that the passage of this bill would result in lowering taxation in all the states, saving the taxpayers many millions of dollars in the purchase of supplies, material and equipment.

—x—

Growers Demanding Government Wool Market Service.—The Bureau of Agricultural Economics of the Federal Department of Agriculture is considering the matter of developing a wool reporting service. At present there are no wool reports available to the producers and shippers except those issued by the trade, and there is a persistent demand on the part of the wool growers and local buyers for such a reporting service in the department. It is expected that the service will be started this fall, and that government reports on wool stocks and market quotations in the large wool markets will be sent out at least once each week.

The courts have decided conclusively that the wool dealers will have to pay excess profits on the 1918 wool clip. To date the domestic wool section of the Bureau of Agricultural Economics has collected excess profits totalling $620,757. Of this amount, $327,145 has been refunded to wool growers by the mailing of checks. Of the remaining $845,112 to be collected, forty-eight cases involving $626,844 are in the hands of the solicitor for the department for recovery through legal proceedings.

Try pouring some kerosene into the cylinders of your tractor when you shut down for the day. Put it in while the engine is hot and turn the flywheel over by hand a couple of times to work the kerosene into the piston rings. It will soften the carbon and loosen the rings if they happen to be stuck. You may have to prime the engine with gasoline to get it to start easily, but it will be greatly benefited by this treatment.

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Some one of the seven types of bodies that are now standard will do your work.

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The First American.

(Continued from Page 5.)

inner side of the lid. And I stood transfixed.

CHAPTER II.

I Begin a Double Quest.

Fastened by silver wires into the snuff-box lid, was an exquisitely painted miniature. A miniature of a girl. Yet, of such a girl as in all my provincial life I had never seen.

I had beheld the plump vrouws of New Amsterdam, the Spanish-Indian bells of Florida, the demure, capped-and-kerchiefed maidens of Massachusetts, the dusky beauties of the tribes—yes, and even the ruddy-cheeked damsels of England.

But in all my small experience with women, never had I set eyes on a face like this one depicted in the oval of porcelain miniature.

The head was small, dainty, set on a slender, white neck. The brow was low and broad, above deep, wonderful amber eyes. The loose piled hair was shot with golden bronze.

Every feature, every curve, spoke of gentleness, brains, and high breeding. Yes, and there was a nameless charm, over and beyond all, that baffled description.

A man of the world might, perhaps, have accorded the portrait an admiring stare and so have passed on. To my provincial senses, though, it was a veritable revelation. I could not move my gaze from those great amber-pictured eyes that seemed to be looking into my very soul.

A clatter of hoofs along the road—and, with a sigh, I forced myself out of my trance of wonder, and looked up. Doubtless, the little man in gray had discovered his loss and had turned back. I was angry at myself for my own disinclination to return that portrait.

But it was a quite different person from the little gray man who now came riding hurriedly toward me.

The newcomer was tall, slender, dressed in the height of gaudy court fashion—long boots and a riding-cloak but half concealing the splendor of his costume.

"I am late," he called, catching sight of me as I stood beside my horse preparatory to mounting. "But it was unavoidable."

Then, as I gained the saddle and he saw me more clearly, he checked himself with a muttered apology.

"—I mistook you," he began, "or—who gave you that?" he broke off, riding closer and pointing to the snuff-box in my hand.

I did not relish his sharp tone. At home, among our savages, we were wont to address strangers more courteously. Still, fancying such might not be the custom in France, I swallowed my irritation and answered:

"If you are speaking of this jeweled snuff-box, I picked it up, in the road. It was dropped by——"

"It is mine!" he interrupted. "Give it to me!"

"It is not yours," I argued gently. "It dropped from another man's pocket. I——"

My apparent meekness served only to increase his arrogance.

"It is mine!" he reiterated. "Will you return it to me, or must I break my riding-switch over those big shoulders of yours?"

Now, I am not by nature a patient man. But much travel in my own dear land, as well as my father's wise teachings, had made me slow to show offense among strangers until I should learn whether a seeming affront was intentional, or was but the way of their country.

So, though I flushed crimson at the coarse threat, I said quietly:

"If the box be yours, perchance you can tell me what is inside its lid?"

"'Tis the portrait of Mlls. Claire de Sieux," he retorted, my size, perhaps, holding him back for the moment from carrying out his menace. "Mlle. Claire de Sieux, daughter of the Chevalier de Sieux of the Rue St. Germain l'Auxerrois. Am I not right? Now that I have answered your impudent question, give me——"

"No," I said slowly. "Not until you can prove it is yours. I saw it fall from the pocket of——"

"Prove?" he echoed haughtily. "Prove? Since when has a French gentleman been called on to 'prove' his given word? And to a beggarly giant of a traveler who wears a suit of last year's fashion at that!"

"My clothes are no concern of yours," I made answer. "Nor, I believe, is the snuff-box. You say it bears the likeness of one Mlle. de Sieux, who dwells in the Rue St. Germain l'Auxerrois? Very good. I will give it to her father. If indeed it be yours, he is likely to know it and to know you; since the box holds his daughter's likeness. You have but to demand it of him and——"

Nothing so inflames an arrogant and unreasonably angry man as to be forced to listen to cool common sense. And this stranger was no exception.

"For the last time!" he roared like an angry child. "Will you give it to me?"

I smiled into his reddened, furious face and shook my head. Thrusting the snuff-box into the breast of my doublet, I made as though to ride on. I had not gone three paces when I heard the whistling sound of a sword whipped from its scabbard.

I wheeled my horse just in time. The stranger, rapier in hand, was riding down upon me.

So amazed was I at his display of uncontrolled rage, that I almost forgot to draw my own sword. I was too ignorant, then, of French ways, to realize how seldom nobles of the court met with opposition to their wishes from the plainer folk they chanced to encounter.

The court dandy, deeming me a middle-class man, with no great skill at swordsmanship, was evidently resolved to take by force what he could not win by commands or persuasion. The fact awakened in me a dogged obstinacy, confirming my decision not to give him the bauble he desired.

In my American home, men were not in the habit of slaying each other on slight provocation. Nor had I any wish to kill this stranger simply because bad temper was forcing him to make an unprovoked attack on me. (For the same reason, I had been content to disperse the little gray man's footpads without raising weapon against them.)

So, as the stranger sought to ride me down, and lunged at me with his gleaming sword, I simply drew my horse to one side to avoid the rush, and, sword in hand, awaited his return.

I had no dread of the outcome. My father had been one of Europe's foremost swordsmen in his day; and from childhood he had taught me fencing until at length the pupil could outpoint the master. I had also learned every trick of horsemanship from riders whose skill was world-wide.

As the stranger bore down upon me again, our blades met with a clash that threw red sparks into the air. And in that impact, by the trained fencer's mysterious "sixth sense," I knew I was his superior. It would make my task the easier.

Round and round circled our horses, snapping, stamping, snorting. Our blades played together in the sunshine like lightning flares. The man was strong. Rage lent him new vigor. He was an adroit swordsman, too.

For a mniute or more I let him take the aggressive, and contented myself with guarding the deadly thrusts he poured in upon me.

"Canaille!" he panted scoffingly between lunges. "Your sword-play is as old-fashioned as your clothes. Yield! Give me the snuff-box and take your life in exchange. In another minute I may not be so generous."

"Your generosity is sudden," I drawled, easily guarding his blows. "And it seems to spring from the fact that my old-fashioned sword-play does not yield as readily as you expected to your new-fangled fencing tricks. If you will permit a raw American to give you a humble lesson in those same old-fashioned tactics, pray lunge once more for my throat."

As I spoke I lowered my sword-point, leaving my throat and chest invitingly exposed to his attack.

In his blind hate he rushed into the trap. Taking swift advantage of the "opening," he hurled a terrible thrust straight at my unguarded throat. Almost quicker than the eye could follow, his sword-point spend. Then—

A quick swirl of my own blade and the sword sprung from his hand as though torn away by a cyclone. Into the air it flew—high—higher—and landed, point downward, in a clump of roadside bushes 30 feet away.

It was a simple disarming trick that my father had evolved and taught to me. But to the stranger it must have seemed miraculous. For a moment, he sat his horse, gasping, his eyes sticking out like a fish's from his red face.

I saluted, sheathed my own weapon, gathered up my reins and prepared to ride on toward Paris. But at my movement, he gave a shout of crass fury,

suddenly slipped his head beneath his cloak and pulled out a long pistol.

He leveled this at me; the whole maneuver being so quick that I scarce understood it. Barely in time, I threw myself, Indian fashion, for over one side of my horse, leaving but a leg gripping the saddle. The pistol-ball whizzed above me, grazing the top of my boot in its flight.

Scarce had it passed when I was upright in the saddle again and driving both spurs into my mount, just as the stranger drew the second pistol from his belt.

He did not fire it. Sending my horse forward in a bound, I guided the brute so that his shoulder struck glancingly across the nearer forequarters of the stranger's steed. It was a Spanish riding trick I had learned in Florida.

My horse's shoulder struck the other brute's at such an angle as not to injure himself or check his own stride; yet so as to throw the second horse wholly off his balance.

Down went the stranger and his steed in one scrambling, snorting, dusty heap. Together they rolled into the wayside ditch.

I paused only long enough to see the man crawl (cursing, but evidently unhurt, beyond a few bruises) to his feet and shake his fist at me in impotent madness.

Then, raising my hat in courteous farewell, I galloped away toward Paris.

As I rode from Auteuil to the capital I felt a sudden homesickness for America, where men were true and simple and where harmless strangers were welcomed instead of being attacked.

But the memory of a pictured face comforted me. A face with a crown of golden hair and deep, wondrous amber eyes.

Mlle. Clair de Sieux! An aristocrat, if one might judge from the name. But more probably the daughter of the little gray man; since it was in his snuff-box I had seen her miniature.

Good. I would ride direct to the home of the Chevalier de Sieux, and I would discover that he was the little gray man. And I would return to him his snuff-box.

Then—I hoped—for reward, I might be permitted just one glimpse of the glorious original of that miniature.

CHAPTER III.

A Weird Wooing.

My horse stabled and my riding-clothes changed for fresher attire, I made my way on foot, through the early twilight, across the Seine, past the Louvre, and to the little, narrow street of St. Germain l'Auxerrois.

On my way I paused for a shuddering glance at the squat church from whose belfry, fifty years earlier, had clanged the awful signal for the massacre of St. Bartholomew.

An idler directed me to the house of the Chevalier de Sieux. It was a gray-stone building, set back from the street, and with a front garden, half choked in shrubbery. Unlike most Paris houses, there was no street wall shutting off its garden from view.

Up the walk I went, and up the steps to the grilled gates. There, at my summons, a porter appeared. I suppose he must have been assured of my respectability. For, after an appraising glance, he admitted me.

I was shown to a gloomy, candle-lit drawing-room, while a servant bore my message to the chevalier.

I paced up and down the stone-floored room, noting its ancient furniture, its dreary stretches of wall, its strewn rugs and funereal portraits. Even the bright candles in their sconces could not inject a ray of cheer into that musty, dolorous atmosphere.

Surely, an ill setting to a jewel like Claire de Sieux!

To reassure myself, as well as dispel some of the gloom, I drew forth the snuff-box, meaning to take one last look at the miniature before it should leave my possession.

A heavy step in the corridor halted me. I turned to face the door, whimsically thinking how surprised the little gray may would be to see once more his American rescuer.

The steps reached the doorway. A large, heavy-built man, richly dressed and with iron-gray hair and florid, truculent face, came into the room.

"My footman," he began harshly, "did not catch your name aright. Whom have I the honor of——"

He paused, catching sight of the snuff-box in my hand. With a deep glance at its cover, he advanced more graciously toward me.

"You are welcome sir," he said in a pleasanter voice. "Consider me your most obedient servant. I trust you have——"

"Pardon," I interposed. "Have I the honor of addressing the Chevalier de Sieux?"

"Mine is the honor, sir," he replied. "And now, you will not care to waste words on an oldster like me. We can speak of weightier affairs later. For the present——"

He broke off, touched a bell and whispered a word to a servant who appeared.

"I have brought this snuff-box," said I, "to——"

"Hush!" he begged me in a low, tense voice, his florid face paling a little. "We can speak later at a safer place and time. Remember that under the great cardinal's rule the very walls and floors have ears. And there is something far pleasanter for you to discuss just now. Here is the 'something.'"

There was a light tread in the stone hall, a rustle of soft silken skirts. Then—

"You sent for me, father?"

She spoke as she crossed the threshhold, and before I could see her. Yet, anyhow, I should have known anywhere that that soft, sweet voice belonged to the owner of the amber eyes I had dreamed over in the miniature. But there was a tremor of fear in the silver tones, and it struck me to the heart.

She entered the room—tall, slender, infinitely graceful in her clinging white gown. Instinstively I took a step toward her. She turned and saw me.

Our eyes met—mine and the amber wonder-eyes of the miniature. And in that moment, so far as I was concerned, the mischief was done—done for all time and eternity.

I tried to bring my swaying senses back to sanity. But I felt in a dream. Yes, and as in a dream I heard the Chevalier de Sieux's rough voice saying in heavy jocularity:

"Claire, here is the bridegroom I promised you. Sir," turning to me, "you have but 15 scant minutes for your wooing. The priest is already in the chapel."

Then he swung out of the room, clanging the double doors shut behind him. Oh, assuredly, it was a dream! One of those fantastic, impossible visions of slumberland, that make us, waking, marvel at our own crazy imaginations.

I looked at the girl, half expecting her to melt into viewless air before my gaze. But there she stood, silent, inert, her lovely head bowed, her white little hands close-clasped.

There was something so childlike about her, and her attitude was so like that of a little girl who stands helpless and dumb before a cruel teacher, that it woke in me a strange, all-encompassing pity.

"Please!" I blurted eagerly. "Don't look like that. Please don't!"

I was talking like any boorish schoolboy. Yet I think my blunt words touched her more surely than any high-flown utterance would have done.

For she glanced up furtively, and some of the hopeless panic left her fear-widened eyes.

"I don't mean to distress you," I went on awkwardly. "Please don't take your father's odd speech to heart. It was in abominably bad taste, of course. But he was only jesting. You much know him well enough to——"

"He was not jesting," she returned. "And you must know it. Why try to deceive me by——'

"I have never had the wit or the desire to deceive anyone," I answered. "Least of all you."

"What else is it, then," she argued with tearful vehemence, "when you join my father in trying to coerce me into marrying you—an utter stranger? You

(Turn to Page 16.)

Note these New Prices on U.S. Tires

ON July 29, 1922, the lowest prices ever quoted on U. S. Passenger Car Tires went into effect—Royal Cords included.

These new prices should give confidence to dealers and car-owners that no lower basis of quality tire prices will prevail.

Bear in mind that these prices apply to the most complete line of quality tires in the world. Remember, too—as you read the following table—that U. S. Quality has been positively maintained.

SIZES	Royal Cord	FABRIC Nobby	Chain	Usco	Plain
30 x 3 Cl.	—	$12.55	$11.40	$9.75	$9.25
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31 x 4 "	—	23.00	21.35	18.65	—
30 x 3½ SS.	14.65	—	—	—	—
32 x 3½ "	22.95	20.45	16.90	15.70	—
31 x 4 "	26.45	—	—	—	—
32 x 4 "	29.15	24.35	22.45	20.85	
33 x 4 "	30.05	25.55	23.65	21.95	
34 x 4 "	30.85	26.05	24.15	22.40	
32 x 4½ "	37.70	31.95	30.05	—	
33 x 4½ "	38.55	33.00	31.05	—	
34 x 4½ "	39.50	34.00	32.05	—	
35 x 4½ "	40.70	35.65	33.55	—	
36 x 4½ "	41.55	36.15	34.00	—	
33 x 5 "	46.95	—	—		
35 x 5 "	49.30	43.20	39.30		
37 x 5 "	51.85	45.75	41.70		

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The dealer with a full line of U. S. Tires at these new prices can serve you better than you have ever been served before in the history of the automobile.

If there ever was any fancied advantage in shopping around for tires it disappeared on July 29, 1922.

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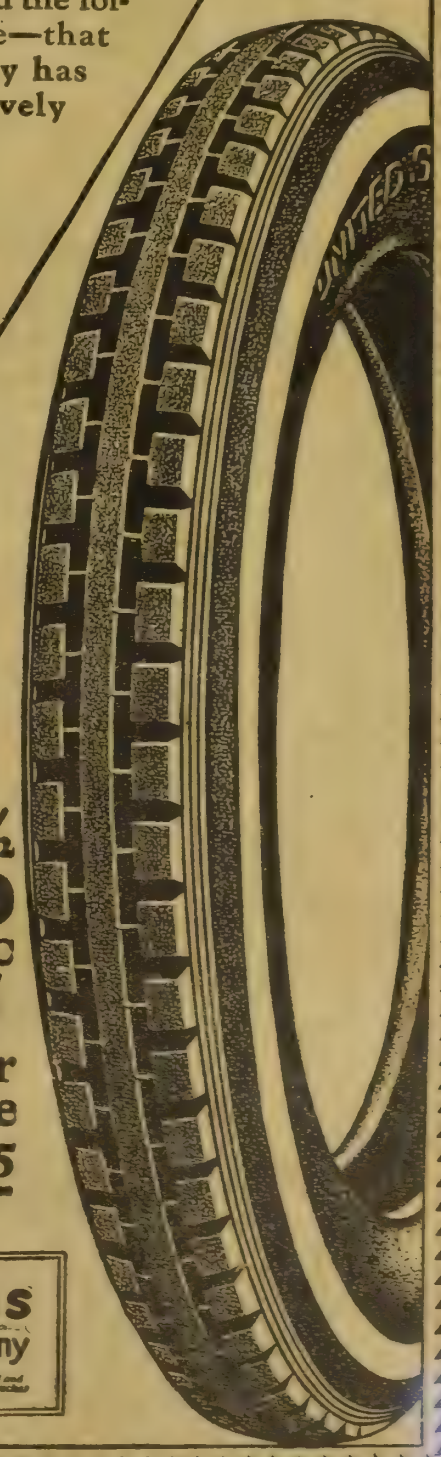

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Farmers' Service Bureau

Readers are invited to make generous use of this department. Questions regarding any branch of farming, livestock production, animal diseases, legal matters pertaining to the farm, homestead inquiries and the like cheerfully and promptly answered by letter and through the magazine. Address all communications to SERVICE BUREAU, WESTERN FARM LIFE, Denver, Colorado.

Federal Farm Loan Comes Slow.

Last fall I made out an application for a Federal Farm Loan through the Farm Loan association here at Cedaredge. I paid the $10 required, but have heard nothing more from it. There are ten or more applicants in this district. A government viewer was here about a month ago, but he looked over only one farm as far as anyone knows, and did not go to see the secretary of our association. What can I do to hurry this up? If I cannot get my loan soon I am afraid we will lose our home.—L. M. V., Delta county, Colo.

The only thing I can suggest is that you write direct to the Federal Land Bank, Wichita, Kan., telling of the delay in getting your loan through and explaining your urgent need of having the money at the earliest possible time. —G. C. W.

County Pays for Roads.

Does a county have to pay for a right of way across deeded land in establishing county roads?—J. K., Custer county, Colo.

The county commissioners have the right to declare a highway along section lines. In establishing county roads the board is required to appoint road viewers and pay the damages to property owners. The best way for you to get at the exact status of the road in question would be to investigate at the office of the county commissioners in your county seat town.—G. C. W.

Tenant Liable for Damage.

A man who has been damaged by water from an irrigation ditch on an adjoining farm proposes to sue the owner of this farm which is operated by a tenant. It seems the tenant allowed the water to flow in large quantities from the ditch, thus damaging the crops of the man seeking redress. Is the owner or tenant liable?—F. L., Jefferson county, Colo.

In my opinion, the tenant is liable if he caused the damage and the owner is not, unless he authorized it.—Hamlet J. Barry, Equitable Bldg., Denver, Colo.

Cannot Reclaim Abandoned Water Right.

In 1897 I bought a farm with a three-quarter interest in a ditch. The owner of the other quarter interest never worked his part nor put any money into it. I bought the right of way and extended the ditch and later bought another right of way midway of original ditch and rebuilt part of it. Has this other party any claim to his water right? He has not paid anything nor used the ditch for twenty-five years. Has he any recourse by law in his endeavor to claim his original rights?—P. N., Pueblo county, Colo.

Non-use of water for twenty-five years is rather good evidence of an abandonment. In my opinion this amounts to an abandonment of the water right and I think he could not prevail in asserting any rights after so long a time.—Hamlet J. Barry, Equitable Bldg., Denver, Colo.

Protection Against Inferior Bull.

I have a purebred bull in my herd and another party allows his poor grade bull to run with my stock. I have asked him to keep the bull at home, but he will not do so. Can I force him to keep the bull out of my herd?—R. A. M., Lincoln County, Colo.

Take the matter up with your district attorney. An inferior bull is not permitted to run at large.—Hamlet J. Barry, Equitable Bldg., Denver, Colo.

Regaining Title to Land.

A $1,500 first mortgage against a section of land I sold was to be paid by the purchaser. The trust company is now foreclosing. I hold a second mortgage for $3,000. If I buy the first mortgage back, can I foreclose on the second and get title to land back? The purchaser has not paid the interest on the second mortgage this year. The contract states that the mortgage can be foreclosed if interest is not paid. Is the six months time figured from the date the land is sold or from the date the mortgage became due? How long is it advertised before sold?—M. H., Wyoming.

Your best plan is to buy the first mortgage and then foreclose that mortgage, getting title in your own name. If the mortgage is a trust deed the deed provides the time for publication and advertisement.—Hamlet J. Barry, Equitable Bldg., Denver, Colo.

Controlling Black Locust Borers.

Is there anything that can be done to keep the borers from killing my black locust trees?—H. R., Kit Carson county, Colo.

There is little that can be done to check the ravages of this insect. The adult beetles appear during September and the female lays her eggs in the crevices of the bark. The adult insect feeds principally on the golden-rod. The grubs hatch out in five or six days after the eggs are deposited and immediately bore through the bark and remain active until cold weather. During the fall the location of these grubs or larva often can be discovered by the presence of small moist spots on the bark and the small masses of sawdust which they push out through the openings of their tunnels. The next spring they again become active and bore more deeply into the tree, remaining active throughout the summer, or until they transform into the mature insect.

About the only thing to suggest is white-washing the trunks and main branches of the trees during the late summer before the eggs are laid. The insects do not seem to deposit their eggs as readily on bark coated with whitewash as on untreated bark. The whitewash should be carefully applied so that all the cracks will be filled. It might help some to keep all the golden-rod in the vicinity of the trees killed off, as this would remove the principal food supply of the adult beetle.—G. C. W.

Keeping Cider Sweet.

Can you give a formula for keeping cider sweet? I tried putting soda in some but it worked as though it had not been treated.—O. L., Jefferson county, Colo.

The only satisfactory method of preserving cider is to pasteurize or sterilize it and seal it. The idea that cider can be kept sweet satisfactorily by the addition of some chemical substance is entirely wrong. It requires considerable care to preserve cider sweet, but it can be done. A recent government bulletin entitled "Farmers' Bulletin 1264, Farm Manufacture of Unfermented Apple Juice," can be obtained free by addressing United States Department of Agriculture, Washington, D. C. This bulletin goes thoroughly into the methods of handling unfermented apple juice and will give all the information needed.—G. C. W.

Ditch Owner Liable for Damage.

I own a ranch with a ditch running through it. This ditch is a feeder to a lake and was built about sixteen years ago. At the time it was built, five spillways were put on the place. No agreement was made at the time. When we have heavy rains these spillways overflow and do damage to crop and fields. Can I make them fill these spillways in? They placed two big rock piles on my land. Can I have them remove these? What steps shall I take? Thanking you in advance.—J. M. P., Pueblo county, Colo.

The owner or owners of a ditch are generally liable for damages caused through the operation of that ditch, or any operations incidental thereto. In your case if you have allowed the conditions described to go on without protest on your part, it is possible that a court might take the position that you had given your consent and the ditch owners had acquired some rights.

You should first, in writing, keeping a copy for yourself, call the attention of the owner to the situation and request that the spillways be filled in and the rock piles removed, or else that you be compensated for the damages done on your land, giving notice that if this is not done you will bring suit. If your request is not complied with you should take the matter up with a competent attorney and instruct him to take the matter in hand.—A. Lincoln Fellows, Senior Irrigation Engineer.

Enforcement of Grazing Laws.

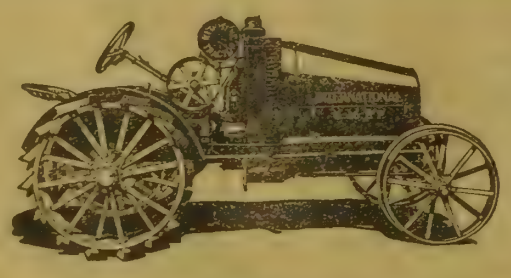
The law says: "It is unlawful for stock to graze or run at large in a public road that is fenced on both sides with a good three-wire fence having posts approximately twenty-five feet apart." Who enforces the law in the county? If the proper authority does not enforce the law what redress does one have?—J. H. H., Kit Carson county, Colo.

The county attorney, whose office is at the county seat town, is the law enforcement officer of the county. Information relative to law violation should be reported to him.—G. C. W.

Colorado Herd Law.

Is there any law in any of the counties of Colorado against turning horses and cattle out to graze on unfenced land outside city limits?—L. F., Otero county, Colo.

The Colorado herd law permits horses and cattle to run at large on unfenced land. Farmers are required to protect their crops with lawful fences.—G.C.W.



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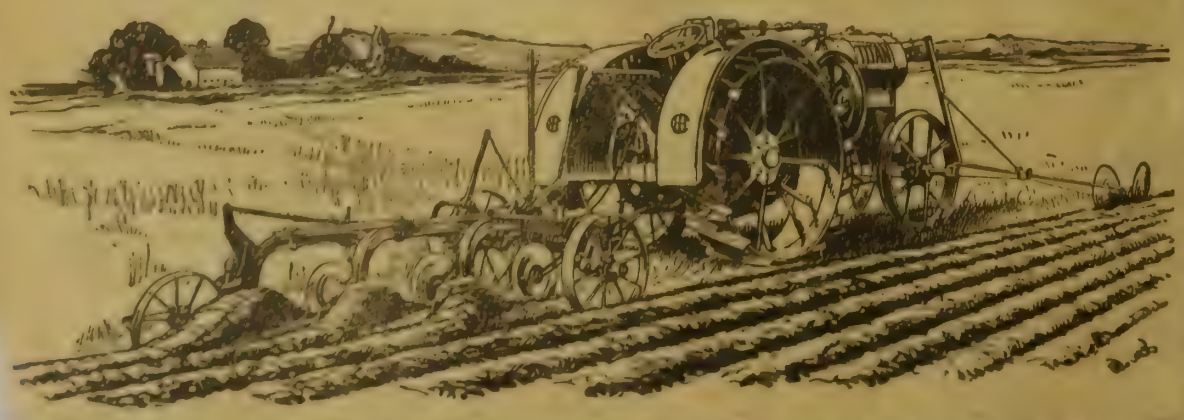

VETERINARY ADVICE.

Questions in this department answered by Dr. George H. Glover, head of the Veterinary Department, Colorado Agricultural college.

Nail in Heart Sack.

One of our cows, a two-year-old, got sick recently and nearly quit giving milk. She walks slowly and seems droopy and lifeless. She seems to fill up during the day in pasture, but we never see her chewing her cud. What is the trouble and what can I do for her.—J. H. L., Boulder county, Colo.

The symptoms given rather indicate foreign body penetrating the heart sack. Under the circumstances, this is of course only a suspicion, but warrants an examination by your local veterinarian. This condition occurs frequently in cattle, especially in the family cow and animals that are manger fed. It happens in this way: The diaphragm is in contact with the second stomach on one side and the heart sack on the other. The second stomach is a repository for an assortment of hardware, nails, tacks, wire, etc. These things are found in the stomachs of all cattle that are kept in confinement. The contractions of the stomach on sharp objects frequently cause them to penetrate the stomach wall and make their way through the diaphragm and pericardium. Several of these cases are seen at the college hospital clinic every year. They are nearly always fatal.—G. H. G.

Peculiar Disease Affects Cattle.

Several of my cattle have died this summer from a peculiar disease. They first get lame in the front legs, walking as though they were footsore. In two or three days it passes to the hindquarters, and they act a little defferent in each case. One cow that is still alive walks very humpbacked and strikes her knee joints with her hind feet. Another walked as though she had string-halt. All are paralysed in the hind parts. If they are hurried they go down behind, dragging their hind legs. Some seem to get over it for a week or two and then suddenly go down. When they are first affected their eyes seem bright and they eat as well as ever. Later their eyes shrink back into their heads, but they continue to eat fairly well until the last day or two before they die.

I found a large abscess on the liver of one that died. Another had its stomach full of grass and the stomach looked as though it was coated with a liquid green of some kind. The trouble seems to affet only matured cows from four to seven years old, although a two-year-old bull has been affected. They were all fat and in good condition.

The range has been very short this season and I thought it might be a result of poisoning from eating a specie of vetch which grows abundantly here. Cattle ordinarily do not eat this plant. Cattle belonging to my neighbors have not been affected.—A. M., Jackson county, Colo.

The disease described above appears to be something new in the category of animal diseases. There is no use of guessing at what it might be. A cooperative investigation by a veterinarian and botanist should reveal the nature of the disease and its cause. It might be due to infection, but more than likely it is caused by a poisonous plant.

The matter should first be taken up with the State Veterinarian, State Capitol, Denver, who will take necessary steps to investigate and control the disease. The Agricultural College will be glad to co-operate in the investigation of animal diseases, but the State Veterinarian has charge of the regulatory work in animal disease control, and should first be consulted.—G. H. G.

Knot in Cow's Teat.

What can be done for a hard knot in a cows teat? It first appeared about three weeks ago. It was sore and swollen, but now has gone down and is not sore.—H. P. R., Texas.

Your description does not make clear the location of the "hard knot" in the cow's teat. If it is in the udder at the upper end of the teat, its removal surgically is not practicable and that quarter of the udder will eventually be ruined. If it is in the substance of the teat it may have been caused by many things, and since it is disappearing, it will be well to leave it alone. If it is in the form of an open sore apply carbolized oil or vaseline.—G. H. G.

Horses Rub Manes and Tails.

My horses had lice last winter and got a habit of rubbing. They are now in good flesh and free from lice, but they continue to rub their manes and tails. They have rubbed until sores have come on their hips. What can do for them? —P. M., Crowley county, Colo.

From the description of the manner in which your horses continue to rub their manes and tails, it is my opinion that they are still suffering from some form of skin parasitism. If not lice, you might with the aid of a hand lens determine if there be any mites present. If you so desire, you might secure some of the hair and scaley portions of the skin and send same to Pathology Department of the Colorado Agricultural College, Fort Collins, where a search for parasites will be made without charge to you.—Wm. H. Feldman.

Cow Gives Bloody Milk.

A young registered cow just fresh with her second calf after being milked three months began to give bloody milk from one quarter. This has continued for two months. There is no swelling and no indications of garget. Only once in a while does this quarter give clear milk with perhaps a very little red tint at the last. What is the cause and what can I do for this trouble?—C. W. C., Douglas County, Colo.

Bloody milk is caused by irritation to the secreting tissue of the udder. The irritation is mostly due to infection. Poisons of various kinds are eliminated through the milk glands and sometimes cause considerable local irritation. Certain plants are accused in this connection.

The chances are that there is a chronic infection of the udder which accounts for the bloody milk. In this connection tuberculosis is of first consideration. It will be well to have your veterinarian examine the udder and also test the cow for tuberculosis.—G. H. G.

Curing Piles in Pigs.

What can I do for a little pig that has a bad case of piles? We have had it two weeks and have been feeding it sweet milk.—R. B., Jefferson County, Colo.

Piles or hemorrhoids in your pig is probably due to constipation. Mix enough raw linseed oil with the milk to keep the feces soft and change to other feed as soon as possible. Removing the hemorrhoids surgically is scarcely to be considered unless it is a valuable pig. This would require the services of a veterinary surgeon.—G. H. G.

Horse May Have Glanders.

What is the remedy for a horse coughing, and why is there a white, sticky substance coming from the nostrils?—M. A., Montana.

There are many things that might cause a cough and a discharge from the nostrils. Among the most common things that will cause these symptoms are heaves, strangles, pneumonia and glanders. A white sticky discharge rather indicates glanders, which is an incurable disease, and endangers the life, not only of other horses, but of every person associated with such an animal. You should notify your state veterinarian at once and have the case examined.—G. H. G.

Testing for Tuberculosis.

The Federal veterinary inspectors working in Big Horn county, Wyo., under the direction of Dr. Dallas of Cheyenne, tested about 3,000 head of cattle during the month of June and found only four reactors. These have been killed. The various towns in the county are contemplating the passage of pure milk ordinances with the approval of the dairymen to further the work begun by the veterinarians. Dr. Williams, assistant state veterinarian, was in Fremont county almost all of June testing cows for tuberculosis. About 1,000 cows were tested and only one reactor found.

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These unusual features, coupled with the known high quality of its construction make this 1923 Oakland an ideal farm car—a car powerful enough to negotiate the roughest roads and the highest hills; sturdy enough to keep running year in and year out with a minimum of service attention; roomy enough for quick trips to market, loaded with grain or produce; economical enough in first cost and in maintenance to be practically indispensable.

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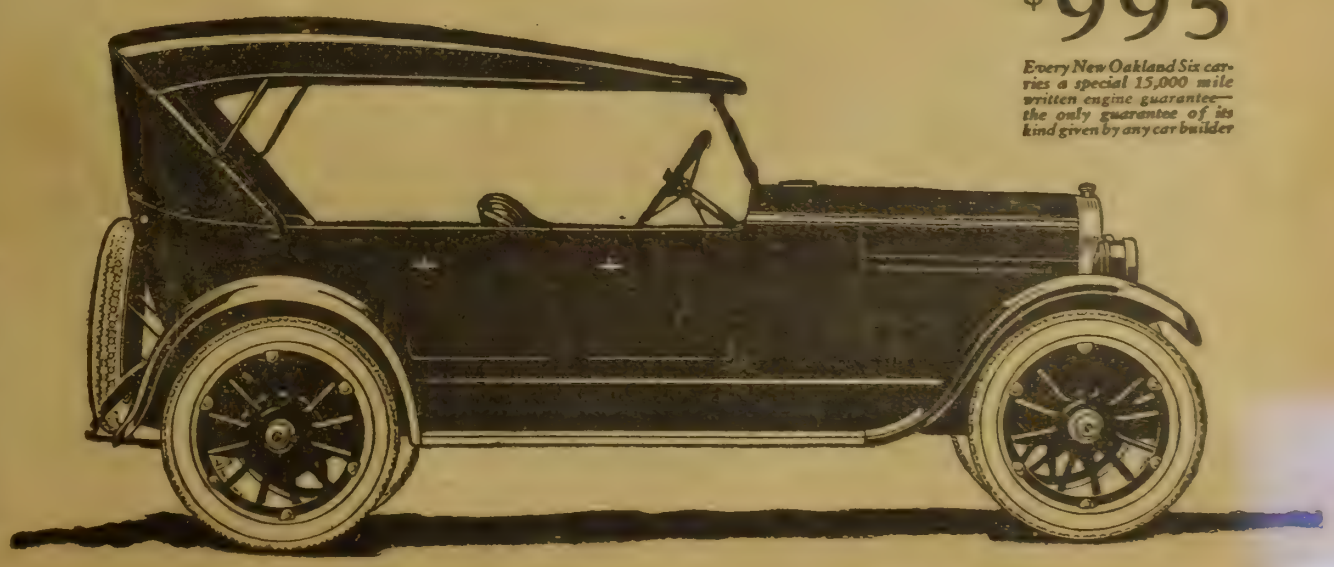

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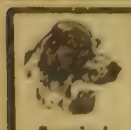
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The Rural Household

Questions about home problems promptly answered by letter and through the magazine. Letters from women containing helpful suggestions for improvement of rural life are always welcome. Address all communications to Mary G. Collopy, Editor Home Department, Western Farm Life, Denver, Colo.

It's September.

It's September It's the fullness and the ripeness of the year;
All the work of earth is finished, or the final tasks are near,
But there is no doleful wailing, every living thing that grows,
For the end that is approaching wears the finest garb it knows.
And I pray that I may proudly hold my head up high and smile
When I come to my September in the golden afterwhile.

—Edgar Guest.

Where Is Your Letter?

The editor of this department is waiting for a letter from YOU. She wants to know:

Your favorite recipe during canning season.

Your ideas on community singing, community libraries, and community recreation.

Your suggestions for childrens' lunch box, for regulation of childrens' chores, for childrens' school clothes.

Your ideas on amusement for the young folks of your neighborhood.

What is your substitute for the amusements found in town?

Your time-saving, step-saving schemes from day to day.

In fact, anything which touches your every-day life should interest every reader of this department.

We are going to watch for the mail-carrier!

My Neighbor's Story.

Mrs. W. G. Jamison of La Veta, Colo., chairman of the Western Division of Woman's Committee of the American Farm Bureau Federation, sent us a letter telling of the work of her important committee and its accomplishments thus far.

In presenting their report to the executive committee of the American Farm Bureau Federation, the Woman's Committee outlined its function in this way:

"The time has come when special stress shall be laid on the social and educational features of this work, and this committee having been appointed with this idea in mind, conscious of its opportunities and responsibilities in connection with the rural American home, beg to present the following:

Long Time Program—Community organization, recreation, rural libraries, conservation of time and human energy, intelligent use of leisure, rural schools, health and hygiene, raising home-making to the status of a profession, and world peace.

Short Time Program (For Immediate Work)—Community organization, recreation, rural libraries."

Upon the recommendation of this committee its name was changed to "The Home and Community Department of the American Farm Bureau Federation." Mrs. Jamison says: "We hope with this name to silence, once for all, the talk of an independent 'Farm Woman's Bureau.' This is for the entire family. A separate bureau would weaken the federation."

Wider publicity is to be given the work of this committee as soon as appointments can be made.

(Editor's Note: Western Farm Life readers are proud of the work which Mrs. Jamison is doing—proud because she is one of us. Her home is a farm home and her children are happy, healthy, useful farm boys and girls.)

What Is Filled Milk?

The terms "filled milk" and "oiled milk" keep bobbing up in the daily press and farm journals with discussions from those for and against the Voight anti-filled milk bill. What is it all about?

Is "filled milk" related to you and your household? to your cooking? and the good health of your children?

"Surely," you will say, "a farmer's wife has no need to feed her family such things as "oiled milk."

That sounds reasonable enough; the farmer's family ought to have the best of all farm products. Yet Canada, a great agricultural country, found it necessary to forbid the sale of margarine in order to insure the necessary supply of butter in the diet of her people; and Denmark, famed for her dairy products, found that in certain districts the farmers were selling off all their butterfat and that their children, fed on separator skimmed milk, had developed fatal eye diseases caused by a lack of butterfat in their diet. Our own America is not safe in this respect. In recent years it has been found that 20, 30 and even 40 per cent of the school children of both town and country are 10 per cent under normal weight for their ages. These children improved rapidly when put on a liberal allowance of milk.

These facts are mentioned to show that even people on the farm need to be reminded of the danger of depriving human beings of good butter and pure milk—the foods that constitute the only dependable source of the fat-soluble vitamin. This vitamin is sometimes known as vitamin A. It is the growth factor, necessary to normal growth of children, and, as far as we know, just as necessary to the good health of men and women.

First, what is "filled milk"? The term is new to our ears because the product is new. "Filled milk" is a compound of separator skimmed milk and conoanut oil. Most of it is manufactured by the same people who put up whole evaporated milk. "Filled milk" is what the manufacturers call a by-product, which means in this particular case that they sell off the butterfat from milk and then evaporate the "Blue John" emulsified with cocoanut oil and sell it as a compound to be used in cooking and baking instead of whole milk.

Next, what is "filled milk" like? Well, the manufacturers have done a good job. They have been able to manufacture a compound that looks like evaporated milk, smells like it and tastes like it—until it gets stale. It fools the eye, the nose, and the tongue, but—and here is the point to remember—filled milk never fools the human body. Cow's milk with the butterfat left in it is the only milk that will do the building and repairing needed there. "Filled milk" cannot be substituted for cow's milk because coconut oil has no growth-stimulating qualities; vitamin A is not in it. If this previous vitamin is omitted from foods the human body will certainly tell the tale.

Now, let us examine carefully the plea that "filled milk" is for cooking and baking and not for children, for that is what the advertisers of this product urge. Here, they say, is a cheap milk to keep ready on your pantry shelf for soups, gravy, breads, puddings, cakes and all creamed dishes. As to the economy plea, perhaps you have found out long ago that substitutes and makeshifts are never cheap. But counting merely in pennies, whole evaporated milk and "filled milk" sell for the same price in many towns and at the best there is never but a cent or so difference in price.

So much for money value; now as to introducing this product into the family cooking and baking. Has it the food value you seek? You have been taught not to bother to try to measure food in calories or in protein, fat and carbohydrates, but to measure foods in the materials that will produce growth—growth of teeth, growth of bone, growth of muscle—that is, growth of the entire body. Nobody denies that skim milk plus coconut oil has a food value. The point is that it lacks the peculiar growth value of whole milk and cannot replace milk even in cooking.

Suppose you follow a little recipe book put out by one group of "filled milk" manufacturers and go through the day's cooking with 'filled milk." The Sunday menus do sound good. Breakfast, dinner, supper is made up of fourteen different food items. Of these, ten dishes are made with, or else contain, "filled milk."

The recipes for a family of four call for at least three cans of filled milk—a volume of liquid equivalent to six quarts of milk of 3.7 per cent butterfat content.

Your family has had three pints of filled milk, you have spent your money, and you are not a bit nearer the solution of your problem, which problem is to see to it that each member of the family averages at least a quart of real milk each day. The nutrition experts have told you to slip it in somehow as a drink or in cooking; that the science of nutrition teaches that milk is just as necessary for the man or woman as for the child of five. Now, if you follow the advice of the advertisers of "filled milk" instead of the science of nutrition and use this product in cooking and baking, the members of the family who drink little milk thus lose the whole supply of real milk from their diet.

There is just one economical solution of this problem, and it is the old way of your mother and grandmother before you—use real milk for good cooking and nutritious food. You give your family cream soups and custards for the sake of the milk that is in them. Why substitute "filled milk"? Would you be willing to leave out the very thing that you have been warned to put in as a protective food. If canned milk is more convenient for cooking, use whole evaporated milk which contains real butterfat and not coconut oil. "Filled milk" is not for the farmer's wife nor for any good provider who plans food to build stout bodies. It lacks the food value of whole milk and if used in cooking practically displaces real milk in the diet of men and women.

Our Fashion Service.

All patterns 12 cents each. Address Western Farm Life, Pattern Department, 1518 Court Place, Denver, Colo.

Read This Before Ordering: Patterns ordered through this magazine are mailed promptly from the factory at Brooklyn, N. Y., and arrive in 10 to 12 days from time order reaches Western Farm Life. Be sure to specify size and number of patterns. Write your name and postoffice address plainly to avoid delay. These patterns are handled at cost, as a service to our women readers. The price of 12 cents includes postage.

4080—A Dainty Tub Frock.—Tissue gingham or wash silk would be pretty for this model. As here shown checked gingham and organdy are combined. The sleeve may be finished in wrist or elbow length. The pattern is cut in three sizes: 16, 18 and 20 years. An 18-year size will require 6⅝ yards of 32-inch material. The width of the skirt at the foot is about 2¼ yards.

4097—An Up-to-Date Attractive Costume. Comfortable and practical is the development of this style. The skirt with its slenderizing plait fullness, is mounted on an underbody. The blouse, long of line, and with a smart vest finish, may have its sleeves short or in wrist length. This model is excellent for silk, kasha, crepe, and for linen and other wash fabrics. The pattern is cut in six sizes: 36, 38, 40, 42, 44 and 46 inches bust measure. A medium size requires 5¾ yards of 32-inch material. To make underbody, sleeve facings and vest portions of plain material as illustrated 1¼ yard 40 inches wide will be required. The width of the skirt at the foot is 2⅝ yards.

4085—A Smart and Pretty Frock. One could have this in taffeta, kasha, or crepe weaves, with bead embroidery or stitchery for decoration. The panels give length and are a unique feature of this style. The pattern is cut in four sizes: 8, 10, 12 and 14 years. A 10-year size requires 4¼ yards of 32-inch material.

4088—A Popular Style. Here is a simple sleeveless style, with a neat guimpe that may be finished with wrist length or ¾ length sleeves. Plaid gingham is used for the dress and voile for the guimpe. This style is nice for tub silk, for crepe and gabardine. The pattern is cut in four sizes: 6, 8, 10 and 12 years. A 10-year size requires 2⅛ yards for the guimpe and 2¼ yards for the dress of 32-inch material.

3705—A Popular House Dress. It is cut in seven sizes: 36, 38, 40, 42, 44, 46 and 48 inches bust measure. A 38-inch size will require 6¾ yards of 27-inch material. This model has good lines and practical style features. The sleeve may be finished in wrist or elbow length. The

Kodak Finishing

One roll film developed and 6 velvet prints for 15 cents (coin). This is a "get acquainted" offer, good for first order only. Kodak Kitchen, Yale, Ok.

42 New Embroidery Designs for Colored Linen Handkerchiefs

Newest designs and color combinations for this fall and for making Christmas gifts.

Each package contains 42 hot iron transfers, every design original and exclusive, no two alike. Clever combinations with full stitch instructions and color schemes for applique, lace and drawn work; 36 patterns for ladies' handkerchiefs and 6 for men, enabling every woman to easily make charming gifts, ordinarily costing from $2 to $3 for only a few cents.

These patterns are not sold in stores and can be obtained only from the manufacturer. A special introductory offer is being made to introduce them. The manufacturers are sending to anyone who will write them two regular $1 sets for only $1. This liberal offer enables you to get your own patterns free, as the extra set can easily be sold for $1.

If you wish to see these newest patterns simply write the Western Pattern Company, 1435 Waldheim Bldg., Kansas City, Mo. Pay your postman $1 and postage when the sets arrive. After examination you do not wish to keep them, return the packages and your money will be promptly sent back. Be the first to have these new designs. Write today. A postal will do.

width at the foot is 2¼ yards. Gingham, percale, flannelette, challie, lawn, dimity, calico and chambrey are good for this design.

4089—A Sleeveless "Cover-All" Apron. Unbleached muslin with cross stitching in red or blue would be nice for this serviceable model. One may use gingham, percale, crepe or drill. Sateen or chintz is also desirable. The Pattern is cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires 4½ yards of 32-inch material.

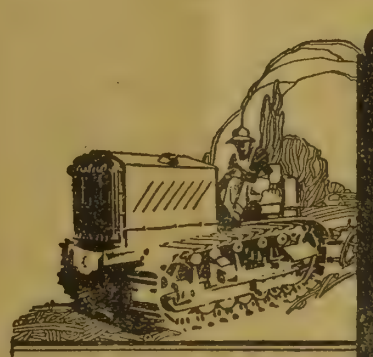
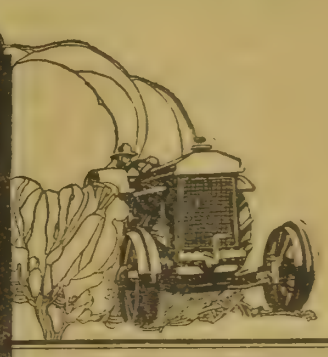
4091—Girls' Dress. This is a splendid warm weather frock, and one that may be worn with a guimpe on cool days. Cretonne in red and blue tones is illustrated with binding of black sateen. Crepe and linen are also good for this style. The pattern is cut in four sizes: 2, 4, 6 and 8 years. A 2-year size requires 1½ yard of 32-inch material.

3885—A Popular Romper Suit. Children usually look happiest when comfortably dressed for play, and surely the bloomer suit has the right lines for comfort and convenience. This model has a pretty pocket and is easy to develop. The rompers may be worn without the smock. Pongee with stitchery is here shown. One could have chambrey, or pin checked gingham. The sleeve may be finished in wrist or elbow length. The pattern is cut in four sizes: 2, 4, 6 and 8 years. A 4-year size requires 2⅞ yards of 32-inch material.

CATALOGUE NOTICE.

Send 12 cents in silver or stamps for our UP-TO-DATE FALL AND WINTER 1922-1923 BOOK OF FASHIONS, showing color plates, and containing 500 designs of Ladies', Misses' and Children's Patterns, a concise and comprehensive article on dressmaking, also some points for the needle (illustrating 30 of the various simple stitches), all valuable hints to the home dressmaker.

Fish eggs, live fish, and every imaginable scheme and appliance used by the State Fish Department will be this year displayed at the Colorado State fair, September 25—30. In all probability this display will be combined with the Federal government's forestry display, so that there may be hills and streams and miniature lakes and trees and all features of forestry, and the trout and all other stream and lake fish disporting themselves in their native element.

This Chart Corrects the Mistakes Before You Make them

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Transmission
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Grease Cups:
Polarine
Tractor Grease

AT LEAST 80% of all motor repair and replacement costs are the direct result of poor lubrication—either low grade oil or oil of incorrect body.

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Motor:
Polarine
Heavy

Transmission:
Polarine
Transmission
Oil

Grease Cups:
Polarine
Tractor Grease

The First American

(Continued from Page 11.)

ask me to believe in you. Yet your very presence here—your demand that I marry you against my will—shows how little you merit my trust. Oh, sir, if you have one spark of manhood, of compassion——"

"Wait!" I cried, dizzy with the tangle of it all. "You are mistaking me for some one else. I have not demanded that you wed me against your will. Vain as perhaps I am, I should never dare raise my hopes to thinking you could consent to such a thing. It is all a wretched, unbelievable mistake."

"It is not a mistake," she contradicted miserably. "My father does not make mistakes. He sent for me this morning, and told me curtly that this was my wedding day; that my bridegroom would be here this afternoon, and that the priest would await us in the private chapel at eight."

"You mean," I exclaimed in surprise, "that he ordered you to marry a man with whom you have not even had a chance to fall in love? You must have misunderstood him. It cannot be possible that a father——"

"Sir," she broke in, eyeing me curiously through her tears, "you speak French without a foreign accent; yet you appear wofully ignorant of French customs. Do you not know our parents teach us from babyhood that love comes to a woman after marriage, and that the disposal of a daughter's hand is wholly in her father's gift?"

"You—you are not jesting?" I asked.

"Jesting!" she echoed bitterly. "Is it a theme for jest? And is it possible that in any land the custom is different? If it be so, then I wish to heaven I had been born in such a planet!"

"I know little of the world," I made answer, "but in my own dear country where folk are simple and primitive as befits rough settlers in a New World—in my country when a lad loves a lass he seeks to win her heart.

"If he succeeds, he begs her hand of her father. If he is worthy and the girl loves him truly, then her parents say yes, and the two are married. But if she cannot care for the man, I know of no father living who would be so base as to force his wishes. As for betrothing a maid to a man she has never seen, 'tis unheard of."

"This land of yours," she cried, her flower face aglow, "surely 'tis not in Europe nor in the east. I would else have read of so perfect a county. Where is it?"

"A month's sail to westward, across the gray Atlantic."

"The Americas? I thought it a wilderness of barbarians. Yet I have read of settlements there—Dutch, French, English, and others. Of which are you—French?"

"No. I am an American."

" 'Tis a term I never heard."

" 'Tis a term my father coined. I am perhaps the first American. But, I believe, one day there will be a nation of them, under whose advance the whole earth will shake. Enough of my affairs and my hopes. I can never cease prating of my loved home when I can find those who will harken. You say your father bids you marry me. I still hold it is a mistake."

"You heard him——"

"He mistakes me for some other——"

"Is it likely," she interrupted with a mirthless little laugh, "that he would offer me to a man he did not know? He would blithely give me to a man I did not know. But he himself is shrewd enough to understand what he does. No, no! He is not mistaken. He plans that you shall marry me—and break my heart."

"I think," I said slowly, "that what I thought was a beautiful dream is becoming a nightmare."

She did not heed me, but went on, more to herself than to me:

"It is the custom, and has ever been so. It never seemed strange to me when my friends were married thus to men they scarce had met. Yet, today, when it came my own turn—oh, I cannot! I cannot!"

"Do not be distressed," I urged, my heart as heavy as lead. "I understand none of this insane web of blunders wherein you and I are entangled. But this I do know: You shall not be made unhappy through any act of mine. You do not wish to marry me. That, at least, is clear. Very good. You shall not."

She raised her amber eyes to mine in half doubting, wholly frightened hope.

"You mean," she whispered, "you mean you will not force me to marry you? That you will release me from this bargain my father has made and——"

"Your father has made no 'bargain' with me," I retorted, "I do not 'bargain' about women. Nor, till this afternoon did I ever see or hear of your father. So have no fear, I beg. I will go to him at once and tell him the match is not to your liking, and——"

"Oh, no, no!" she entreated, white with terror. "He would kill me, or put me forever in a convent. You do not know him. He cannot bear to be crossed. And in a case like this, even the mildest father would be justified, by our customs, in disowning his child. When Annette de la Plage refused to wed the man of her parents' choice, they made her a nun. And when Yvonne——"

"Then what way is there out of it? He is too old for me to challenge."

"Cannot—cannot you say you do not find me to your liking?" she asked timidly. "That is, unless you fear his anger, or——"

"I fear more the anger of heaven were I to tell such a lie," I answered with no trace of gallantry in tone or thought. "Yet, if it will clear you, I will e'en do it."

"I—I thank you, sir!" she replied with a little tremulous sigh that seemed to hold a trifle less of utter relief than I had expected.

She looked at me more bravely now; almost, I thought, with a new personal interest.

"Perhaps," she ventured, womanlike, "perhaps you are betrothed to some one in your own America? Or, it may be you are glad to renounce me? Your American women are perhaps fairer—"

"I am betrothed to no one," I answered, with far more earnestness, I fear, than so simple a denial called for, "and nowhere on earth have I seen a woman fit to tie the laces of your little shoes. Where I to say I am glad to renounce you, I would lie more unpardonably than would he who should say he rejoiced to see the gates of Paradise clanged shut before his face."

She shrank back a step before my ardor. Yet there was a look in those glorious eyes of hers that led me to think she was not wholly displeased at my uncouth praise.

"I have offended you!" I exclaimed in quick contrition.

"No," she answered thoughtfully, "I—I don't think you have. But it is all so strange. I—I never talked alone with a man before. It is not permitted to unmarried women in France. And—and, somehow, I did not know they said such things to girls. Do other women like or dislike it?"

"I do not know," I replied shamefacedly, "I never spoke so to another woman. I never felt so toward another woman. I——"

"My father!" she whispered in sharp warning.

The door opened. I turned to face the ordeal. It was to be harder than I had at first thought.

For, in the past few moments, I had somehow come to find it well-nigh impossible to renounce this French maiden—even for her own happiness.

(To be Continued.)

WIN $1,000.00 OR AN OAKLAND TOURING CAR

Can You Answer This Movie Puzzle?

On the Movie Screen above are the names of 10 Popular Movie Stars, rearranged topsy-turvy. The operator played a joke on the audience and you'll admit it was a good one.

To solve the puzzle, and puzzle it is, rearrange the peculiar sentences on the screen so as to correctly spell each star's name. For example, No. 10 is Charlie Chaplin. You know him. If you can name all 10 Stars correctly you can win the $1,000 or an Oakland Touring Car.

You most likely know the names of the most popular Stars, but just to refresh your mind we are mentioning a few of them:—Constance Talmadge, Otis Skinner, Buster Keaton, Anita Stewart, Charles Ray, Mary Pickford, Charlie Chaplin, Helen Chadwick, Thomas Meighan, Pearl White, Warner Oland, Beverly Bayne, Ralph Ince, Wallace Reid and Dorothy Dalton.

185 "POINTS" WINS FIRST PRIZE

For each name you arrange correctly you will receive 10 "Points" toward the Oakland Touring Car or the $1,000 in cash, or you will receive 100 "Points" if you arrange all 10 names correctly. You can gain 60 more "Points" by Qualifying your answer. That is, by proving that you have boosted the Big Magazine, FRUIT, GARDEN AND HOME to five people. The final 25 "Points" will be awarded by 3 Judges, whose decision will be absolutely fair and is to be taken as final and without question, to the person making up the largest list of correct words from the name of the 10th Movie Actor listed on the screen above—CHARLIE CHAPLIN. It's easy! Can you make out 10-20-30 words like, are-lie-car-pie-hall, etc.? Send in your list of words right away with the names of the 10 Movie Stars. RULES:—Number each word, and in making up your list, don't use proper names, abbreviations, prefixes and suffixes, or obsolete and archaic words. Webster's Dictionary will be used as Final Authority. Use each letter only as many times as it appears. For example: There are 2 a's, therefore "a" may be used 2 times if necessary in forming a word.

The answer gaining 185 "Points" (which is the maximum), will win the Oakland or the $1,000. In case of a tie, all tieing contestants will receive a prize identically the same as the prize tied for. Send in your answer TODAY. As soon as it is received, we will send you a FREE circular telling you all about the Big New Magazine, FRUIT, GARDEN AND HOME, to assist you in qualifying.

COSTS NOTHING TO TRY

You will not be asked to subscribe to FRUIT, GARDEN AND HOME, nor to spend a penny in order to win. Just write your answer to the Puzzle on one side of the sheet of paper and PRINT your name and address on the upper right hand corner. Send in your list of words with your solution before October 10th, the Final Day. Do your best and you can win. Answer the Puzzle NOW.

The Publishers' Sales Co. Dept. 515 CHAMBER OF COMMERCE, ST. PAUL, MINN.

Horse Sales Increased.

Seven leading livestock markets on or west of the Mississippi, according to the Horse Association of America, have forged ahead of 1921 records for January to June, in their horse and mule sales for the first five months of 1922. At Kansas City, Omaha, St. Louis, St. Joseph, Wichita, Oklahoma City and Denver, 76,098 horses and mules were sold up to June 1, 1922, as against 62,451 in the same period last year. Other markets show a decrease so slight that, considering the slack demands of 1922 business, a generally increased proportion of horse use is clearly indicated.

In round numbers, there are 27 million horses and mules in the United States, and last year, according to the Horse Association, over 200,000 of these were sold in only fourteen of our city markets. The National Stock Yards at East St. Louis, Ill., handled the greatest number; their 1921 total was 67,756 horses and mules. The year 1922 promises to exceed this, for the first five months' sales amount to 38,461, as against 33,995 for the same period last year.

Unlucky Coincidence.

And here's one about the Quaker whose patriotism got the better of his religious scruples and who went to war. Crawling through No Man's Land he spied a husky German. Raising his rifle to his shoulder, he shouted:

"Friend, 'tis most unfortunate for thee, but thee standeth just where I am going to shoot."

And blazed away.

Agriculture Sits In On Radio Hearing

FARMERS' NEED FOR CURRENT INFORMATION SOLVED THROUGH FARMRAD CLUBS.

ONE of the most interesting conferences held in Washington recently is the efforts on the part of the experts, commercial, technical and amateur, to arrive at a solution of many problems now arising from the very rapid increase in radio. This conference was called by Secretary of Commerce Herbert Hoover, who personally acted as chairman, and who states that there are now over 600,000 persons possessing wireless telephone receiving stations and that more optimistic estimates place the figures at 1,000,000. Agriculture was represented by W. A. Wheeler, who is in charge of the distribution of market information by radio by the Department of Agriculture.

Agriculture is vitally interested in the development of radio and undoubtedly a large portion of the radio equipment now is found on farms. The government is sending out radio market news from various points and is contemplating the extension of this service. In order to make it successful, however, rules and regulations concerning the ether, including legal definitions, must be promulgated for the benefit of all concerned. To date radio associations or clubs have been formed in many communities, the main purpose of which is to study radio. These also act as self-regulating bodies and endeavor to protect the members from those persons who are inclined to "hog the air," or "jam the ether." It is expected the committees appointed at the conference will take ten days or more to make a report working toward giving the Department of Commerce broad discretionary powers for regulation of all sending and receiving stations.

Boys' and Girls' Radio Clubs.

The "Farm Radio" clubs composed of boys and girls are growing in membership rapidly throughout the country and afford instruction and amusement and offer great opportunities for the early reception of market news and other valuable information. Weather crop and market reports are now broadcast by radio telegraphy and radiophone stations of the Post Office Department. Daily market reports on livestock, grain, cotton, hay, food, fruits and vegetable markets are broadcast over virtually the entire United States. A farmer located almost anywhere can receive them either direct or with the assistance of amateur operators. A number of state bureaus of markets and agricultural colleges are also broadcasting both local and national market and crop reports by radio telegraphy and radiophone.

To conduct radio demonstrations through boys and girls is to grasp a splendid opportunity and contribute to the solution of a problem that is universal. These clubs receive and disseminate daily, information on the weatner forecasts, crop conditions and market quotations. Each member sets up and uses a receiving outfit, thus demonstrating its usefulness. The outside world in this way is brought to the farm doorstep. By disseminating the information received to other farms by telephone or through notices, the radio club member serves his community and adds to the desirability of farm life. These facts are already established by the experience of the boys' and girls' clubs during the past two years.

Wireless reports may be posted regularly each day in some public place where the people interested may see them. The office of the county agent, the post office, or store, or road crossing, may be suitable. When all the members of a club live in one community and each is receiving reports, then they may take turns by weeks in posting reports. When the members are more widely separated each may post reports in his own neighborhood. Another method is to telephone the information instead of posting it. Before a club member is given the responsibility of posting or telephoning his report, his accuracy should be tested.

Type of Radio Wave.

The question of wave frequency or wave length and the kind of transmission used by the transmitting station from which the club member will receive reports are both important. The Air Mail Service of the Post Office use the type of wave known as continuous, or a wave length of 2,500, 3,000, or 4,000 meters. The broadcasting of weather, crop and market reports by most other stations officially designated is done on an assigned wave length of 485 meters. Club members using the simple crystal detector will be able to receive only the latter kind of broadcasted reports, and must be located within fifteen or twenty-five miles of a radio telephone to receive signals regularly. For this reason it is advisable that in the beginning radio clubs be organized near some station transmitting weather, crop and market news on a wave length of 485 meters. Whenever the members are able to purchase the more expensive equipment that will receive messages from greater distances and from stations transmitting continuous waves the distance from the station is less important. Amateurs who themselves transmit are licensed to operate on wave lengths not to exceed 200 meters. If such an operator is near by the club members, the latter will usually be able to receive messages with the crystal detector receiving set, which will afford practice.

Type of Receiving Set.

The stations from which the market reports are now being sent by radio, the type of transmitting sets, the wave lengths used, and the times at which reports are sent out are given in transmitted schedules which are usually furnished on application to the agency supervising or directing transmission. They are also published in the Monthly Radio Service Bulletin of the Department of Commerce.

Arc stations often have a greater transmitting range than the spark stations. Furthermore, it should be borne in mind that spark and radiophone stations transmit damped waves and arc stations transmit undamped waves or continuous waves. This information is necessary for the selection of proper receiving sets.

All Roads Lead to Pueblo State Fair Week.

(Continued from Page 3.)

with harness classes numbering double the usual entries. A spectacular fireworks display will enliven things in front of the grandstand every night, and night and day there will be Wild West stunts of a thrilling character to entertain and amuse the crowds.

Building space has been enlarged and the new State Armory erected on the grounds during the year will house the exhibits of several departments.

The best evidence that the fair has grown in importance is shown by the fact that exhibits are coming from no less than eight other states, in addition to some from foreign lands.

Taken as a whole, there is every indication that this year's fair will live up to the promises made by Manager Beaman in his foreword in the premium list, in which he said that the exhibition would please every one, be educational and instructive, yet with amusement features to amuse the young and old alike, increased premium awards, more and better exhibits in all departments than ever before, with admission charges within the reach of all. Great stress has been laid on the educational features, special efforts having been made to obtain exhibits which would be both instructive and interesting.

In the words of Governor Shoup in his proclamation to the state, "The State Fair of Colorado long ago took its place in the forefront of agricultural and livestock expositions in the west. It has received the enthusiastic support of the people of Colorado for many years until it may be said to be an institution established as firmly in the hearts and minds of our citizens as in the statutes of the state. New buildings have been erected at the grounds this year and a continuing levy of the General Assembly maintains it. As Governor of the State of Colorado I urge an energetic and sympathetic support of the State Fair."

Farm Bureau Wool Pool.

The Colorado state wool pool is progressing satisfactorily. Details are being worked out in an effort to have everything in readiness when the time comes to contract the wool. The wool growers in San Luis Valley have already pledged 1,000,000 pounds of wool which will be a fine start toward the 2,500,000 required to secure the storage and other necessary facilities.

SILO-FILLING—AND GOODYEAR BELTS

The most satisfactory belt he has ever used, says Harold H. Holtzman, of Wheaton, Illinois, is the Goodyear Klingtite Belt. First he threshed with it, then used it in silo-filling, corn-shelling, hay-pressing, feed-grinding and wood-cutting.

"It is a powerful belt," Mr. Holtzman reports, "delivering steadily and sturdily the full power required for the cutting and for forcing the ensilage up the stackpipe. It holds the pulleys in a slipless grip, yet runs freely, so that there is never any worry about overheating the engine bearings. It performs the same in any weather." Goodyear Klingtite Belts need no breaking in. Their special construction so distributes the load that ply separation is unknown to them. They outwear ordinary belts, and earn their reputation as the best help on the farm.

Efficient, economical Goodyear Klingtite Belts come in endless type for all heavy duty and in suitable lengths for water-pumping, cream-separating, churning, electric lighting plant, washing machine and other light drives. For further information, write to Goodyear, Akron, Ohio, or Los Angeles, California.

GOODYEAR

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31x4	10.95	17.75	1.70
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33x4	13.50	18.85	1.95
34x4	14.00	19.25	1.95
32x4½	17.75	24.00	2.20
33x4½	18.50	24.50	2.50
34x4½	19.75	24.75	2.50
35x4½	20.95	24.85	2.75
36x4½	19.95	24.95	2.75
33x5	20.50	25.75	3.00
35x5	20.75	25.00	3.25
37x5	20.75	25.00	3.45
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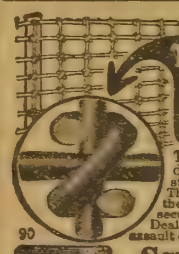

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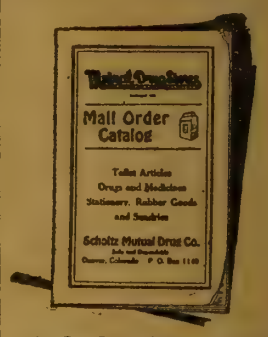

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Planning State Seed Show.

Details of the Colorado State Seed Show and a State Seed Growers' Association are being considered by State Farm Bureau officials, with the view of fostering and promoting the interests of the pure seed growers in this state by providing for the marketing and distribution of this increasing commodity and emphasizing the value of the use and improvement of pure seed. The county farm bureaus in co-operation with Waldo Kidder, agronomy specialist from the Agricultural College, have perfected county associations in most of the farm bureau counties, and a state association is necessary in the near future.

Cattle Going Direct to Feeders.

Cattlemen are co-operating closely with the Colorado State Farm Bu- in furnishing information for farmers of the Middle West supply of feeder cattle. More han twenty train loads are already listed and the list is growing daily. These cattle are sold direct to the men who feed them and are shipped in train loads direct to the feed lots, thus eliminating all unnecessary overhead expense, shrinkage and other losses. The Ohio farmers found this plan so successful last year when they bought 2,000 head here that they now have their men here to purchase several train loads on the same plan. The farmers of Illinois, Iowa, Nebraska and Missouri are working out plans to purchase their supply of feeders in Colorado this year.

Proper Methods Bring Results.

"We have a perfect stand of sweet clover on our plains farm seeded according to your instructions," writes one of our readers in Weld county, Colo. He says, "Although this has been one of our driest years, our crops are good. We believe it pays to farm right."

This correspondent asks what we think of plowing seven or eight inches deep for sweet clover, potatoes, corn and similar crops and running a deep tiller through the ground to a depth of twelve to fourteen inches instead of plowing ten or twelve inches deep. "We have a deep tiller such as they use in the beet districts at our disposal," he says. "It has shovels with very long shanks which loosen the ground, but does not bring up any of the subsoil. Nine horses pull a five-foot cut twelve inches deep. We would do most of it after fall plowing."

This subsoiler gets results for the beet growers and it will undoubtedly do as well for the conditions on the uplands of this locality. The idea is to open up the subsoil and get the moisture down into it and the roots will follow where it is moist and cool throughout the season.

Our correspondent also wants to know what size of plow we recommend for deep plowing, up to ten or twelve inches; also whether a walking plow would be satisfactory, and how many horses to count on. We have found that almost any plow that has a high beam will do good work. If the gauge wheel interferes it can be taken off and a short iron runner substituted to allow more room between the beam and the plow sole. We used to use a 12- or 14-inch Canton or John Deering walking plow with three heavy horses for our deep plowing.—E. R. Parsons.

Success.

The Sunday school teacher was doing his best to inculcate lessons of altruism, and had taken as his example the case of two little boys, one of whom was always ready to grab, while the second was willing to share everything.

"Now, children," he finished empressively, "which of these two boys will grow up into the successful and respected man?"

And as one voice the class answered: "The guy that gits!"

When remounting a rim do not tighten one lug to the fullest extent, but tighten each lug a little at a time until all are snugly in place.

Profitable Farm Poultry

Questions about the farm flock promptly answered by letter. Free advice on all phases of poultry production. Address all inquiries to Poultry Department, Western Farm Life, Denver, Colorado.

In poultry houses equipped with dropping boards there is no need of a separate scratching shed. The dropping boards should be cleaned often, however. If this is done the litter on the floor will not need renewing so often.

All poultry house fixtures should be removable. This includes dropping boards and roosts. Controlling mites and keeping the house thoroughly clean will be much easier if all the fixtures can be easily carried out and treated with disinfectants.

Straw, instead of being burned should be saved, and more of it used around the barn during the winter months. The straw not only contains plant food, but also prevents the loss of liquid manure. This liquid manure contains a large portion of plant food material.

A common mistake in poultry house construction is to make the building too high. Such a building is likely to be cold. Warm air rises and the warmth given off by the fowls rushes to the highest point and cold air crowds in to take its place. This in many cases produces a draft over the fowls on the roosts.

How Long to Keep Hens.

Good hens may be kept at a profit two or three years for market eggs, and for breeding purposes even longer. The largest production comes in the first or pullet year and diminishes 15 to 20 per cent each succeeding year. At the Kansas Experiment Station records for three years on Barred Rocks, Rhode Island Reds and White Leghorns, show an average production the first year for the Rocks and Reds of 170 eggs, for the second year 140, and for the third year 104. The Leghorns produced 198 eggs the first year, 151 the second and 120 the third. It should be noted that a considerable portion of the second and third year's production comes during spring and early summer when eggs are low in price, therefore the net returns from the older hens will decrease relatively faster than the decrease in actual egg production.

Chickens Do Best When Not Confined.

Do you raise chickens? If you do, these bits of information will interest you:

Sprouted oats, added to winter poultry rations, increases the fertility and hatchability of eggs, but as far as the number of eggs is concerned it seems to be immaterial whether they are fed dry or sprouted. Corn silage in small amounts helps production of eggs and increases the hatchability. Dried beet pulp is of doubtful value as a poultry food. Semi-solid buttermilk gives good results as to health of fowls and the number and hatchability of eggs. Fowls allowed to run outdoors during winter laid better than those shut in.

These facts briefly summarize the results of experiments conducted by Horace Atwood for the West Virginia Agricultural Experiment Station, and described in an experiment station bulletin now in the hands of the printer. The bulletin is entitled "Effect of Confinement and Green Feed on Number and Hatchability of Eggs Laid."

The experiments were conducted on the university poultry farm at Morgantown, during the winters of 1920 and 1921, and while not absolutely conslusive cover a sufficient period to strongly indicate the correctness of these conclusions.

Ax Best for Egg Eaters.

Egg eating sometimes becomes a serious vice in a flock, the fowls becoming very fond of eggs when they have learned to eat them. The habit spreads from fowl to fowl and unless checked will often spread through the whole flock. Egg eating usually begins through accident by eggs being broken or frozen. See that the nests are properly supplied with straw or other nesting material and have them darkened, so that if an egg is accidentally broken the fowls will not be likely to discover it. Supply plenty of lime in the form of oyster shells, bone or similar substances to insure a firm shell. As soon as it is discovered that a fowl has formed the habit, the fowl should be removed to prevent the spread of the vice. Once formed, it is difficult to eradicate, and the safest remedy is the death penalty, say poultry specialists of the United States Department of Agriculture.

Fowls sometimes pluck feathers from themselves and from each other. This is often caused by too close confinement, by the presence of insect pests, or by improper feeding. When some of the fowls of a flock have formed the habit slightly, a wide range with a change of diet, including a plentiful supply of animal feed and freedom from insect pests, will usually correct the evil. Above all, see that the fowls have plenty of inducement to exercise. If the habit becomes well formed it is very troublesome and may necessitate the killing of some of the fowls in order to stop it.

Origin of Jersey Black Giants.

Probably the heaviest breed of fowls developed in this country is the Jersey Black Giant. This breed is said to have originated fifty years ago as a result of the work of two brothers, John and Thomas Black. The original crosses included Black Java, Dark Brahma and Black Langshan. It required years of careful selection and breeding to eliminate the feathers from the legs, inherited from the Asiatic crosses, and fix the yellow color of the skin which came through the Java crosses. They were first known as the Black Giants, but have since been given the name of the state in which they originated and are now known as Jersey Black Giants. The hens weigh eight to ten pounds and the cockerels from ten to twelve. Breeders claim to bring them to five pounds in weight in seven months.

Building a Poultry House.

We plan to build a poultry house this fall suitable for 400 White Leghorn hens. We want to make it as convenient for ourselves as possibe and also comfortable for the hens. Our laying flock will run at large except during the breeding season, February, March and April. We already have a house for the breeders. We would like to have these hens all housed in one room or pen if that is desirable. For the past two years our hens have been housed in an open barn and we thought they laid well. The new building will be placed on a south slope. How would you advise building this house and how large should it be? We have the government bulletin entitled "Poultry House Construction."—R. S. G., Elbert county, Colo.

Probably the most economical type of poultry house is the plain shed roof. The best results will come from allowing at least three or four square feet of floor space to the hen. As a rule it is better to have a house for housing so many hens divided into two or three rooms. It usually is considered desirable to have a poultry house at least sixteen feet deep and many poultrymen housing large flocks make them twenty feet deep.

The plan of ventilating entirely through large openings in the front covered with muslin curtains in bad weather is being gradually adopted by leading poultrymen. In the shed roof type of house the back should not be more than four or five feet high. If the house is made too high it will be cold. If the house is made more than sixteen feet deep it may be more expensive as it will require heavier rafters and probably a number of supports through the middle.

The poultry department of the Colorado Agricultural College at Fort Collins is now working out special plans suitable to Colorado conditions. Write to P. C. Jamieson, Extension Service, asking for copies of these plans which probably will soon be available.—G. C. W.

What Breed for Broilers.

What breed of chickens would you recommend for getting the quickest growth in raising broilers?—C. H., Morgan county, Colo.

Poultrymen differ as to the best breeds to use in broiler production. Any of the American breeds as the Plymouth Rocks, Wyandottes, or Rhode Island Reds can be recommended for growing broilers. The Orpingtons and a number of other of the larger breeds make good broilers. The market prefers stock which does not show dark pin feathers, therefore white or buff varieties are to be recommended.—G. C. W.

Interest in Diversified Production.

"Grow feed and food crops sufficient for farm and family," is a slogan recently used in Arkansas, in the boll weevil and cotton growing states and wherever one crop predominates. This program is one that might well be studied in connection with working out cropping plans for Colorado and the mountain states. Last spring the governor of North Dakota issued a proclamation setting aside a six-day period as Diversified Farming Week. In this he stated, in part:

"Whereas, it has been recognized for years that no agricultural state can achieve lasting prosperity where its citizens continue to raise wheat almost exclusively, and that to insure a steady income and certain prosperity as a result of diligence, thrift, frugality, diversified farming is essential, that there may be produced on each farm in our state all the milk, butter, eggs, poultry, corn, potatoes and garden truck that can be used by the family residing on each farm, and such surplus as shall be needed in the community."

During that week 221 meetings were held, one-fourth of the farmers of the state attended and pledged themselves to raise more corn, potatoes, sweet clover, alfalfa and other forage crops, cows, pigs and horses, and to increase the output of their dairies during 1922.

In the great plains area, including western Kansas, Nebraska, and parts of Oklahoma, Texas, Wyoming and Colorado, farmers are being urged to use methods of farming to conserve moisture. The plan suggested is to use part of the land to produce wheat for a cash crop, part for feed such as alfalfa and sweet clover, and part for pasture for livestock. This program gives them the certainty of some income if the wheat fails.

As a result of the campaign in Arkansas last year, almost enough hay, meat, molasses, corn, and potatoes were produced to last until the next harvest. Encouraging changes are also taking place in the farming systems in other localities.

Colorado Mountain Head Lettuce.

According to the report just released by Charles Sperle, representative of United States Truck Crop Reporting Service, as the result of special investigation, the acreage devoted to commercial production of mountain head lettuce in Buena Vista, Westcliffe, Hardscrabble, Divide, San Luis Valley districts and the Western Slope, totals approximately 4,843 cars. Acreages by counties are as follows: Alamosa, 82; Costilla, 50; Conejos, 68; Custer, 700; Chaffee, 900; Eagle, 800; Fremont, 850; Gunnison, 40; Mineral, 300; Pitkin, 350; Rio Grande, 293; Teller, 300.

This is the first season for mountain head lettuce to be grown on such a large scale. Early estimates indicated that a larger acreage was to have been planted, but on account of the crop being new to many growers and the limited shipping facilities, the plantings were somewhat reduced. In some cases the crop is trucked from twenty to fifty miles for final packing and shipment.

Owing to the continued dry weather and unusually high temperatures during July and early August the early plantings did not head up and produce a crop. Some damage resulted from tip burn and a large per cent went to seed. However, recent weather conditions have been more favorable and it is believed that the later plantings will produce a much better crop. So far the quality has averaged No. 2, with a small per cent grading No. 1.

The growing of mountain head lettuce is more or less in the experimental stage, with every effort being put forth to produce a high type product. The altitude at points where this crop is grown ranges from about 7,400 to 9,000 feet.

The carlot movement is variously estimated. It is believed that with favorable weather conditions that around 750 cars will be shipped.

Colorado Fair Dates.

COLORADO STATE FAIR—Pueblo, Sept. 25-30, J. L. Beaman, Manager.
Douglass County Fair—Castle Rock, Oct. 3-6, R. H. Miller, Sec.
El Paso County Fair—Calhan, Sept. 21-23, Bert McCormick, Sec.
Huerfano County Fair — Walsenburg, Sept. 20-23, Chas. O. Unfug, Sec.
Kit Carson County Fair—Burlington, Oct. 3-6, H. G. Hoskins, Sec.
Kiowa County Fair—Eads, Sept. 20-21. J. C. Miller, Sec.
Rio Grande County Fair—Del Norte, Sept. 20-22.
Routt County Fair—Hayden, C. A. Stoddard, Sec.
Trinidad-Las Animas County Fair—Trinidad, Sept. 19-22, Chas. Bailey, Sec.

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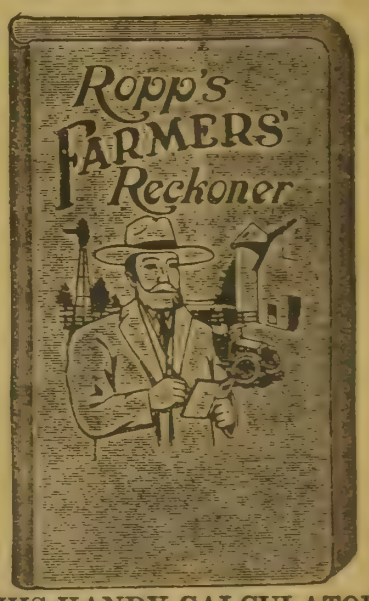

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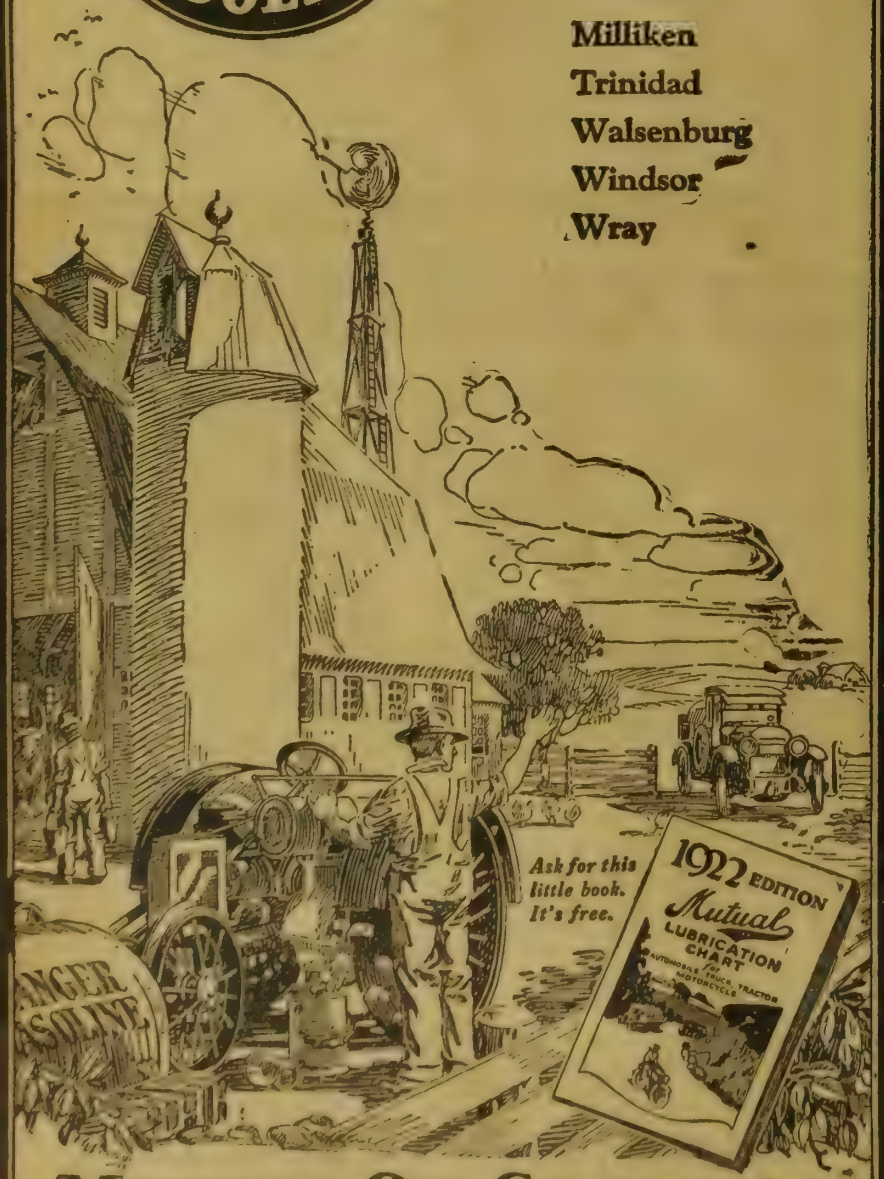

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Market Outlook for Farm and Ranch Products.

(Continued from Page 6).

Many of the Canadian cattle which have come into this country in the last few weeks have been trash of this sort.

Further Decline in Hog Prices on Horizon.

Receipts of hogs at the eleven leading markets last week were approximately 455,000 head, the largest on record for the corresponding week, with a single exception, and 25 per cent above the ten-year average. During the same ten years, the first week in September, which includes the Labor Day holiday, has averaged the lightest of the season. A similar brief gap may occur this year, but about all that can be hoped for is that prices will maintain present levels for a while. As soon as new crop hogs begin to show up in large numbers as they will do in the next five or six weeks, prices upon bacon and butcher grades are due for a further decline. Packing sows are already as low as they are likely to go for several weeks. A change in the character of receipts will occur before long, as brood sows become less numerous and new crop hogs show up in greater profusion. This will tend to sustain the average price level, even though the top of the market is declining.

With an abnormally heavy supply of hogs of above average weight coming to market each week and a fairly large stock of lard and cured meats in storage to be merchandised, consumptive demand has been fully satisfied. More than the normal amount of product has been disappearing into distributing channels in the last few weeks, but the increase in distribution has been due in part to comparatively low prices. In spite of distressing financial conditions abroad, clearances of lard and hogs each week have been holding above the prewar average.

Receipts of Lambs Below Normal.

Receipts of sheep and lambs at the seven leading markets last week increased more than 15 per cent over the previous week. The total, however, was only 216,000 head, compared with an eight-year average for the corresponding week of 344,000 head. The shortage is primarily in western range lambs which have the right of way at this season. From January 1 to August 26, combined receipts at the seven markets were 5,952,000 head, compared with a seven-year average of 6,442,000 head in the corresponding period.

Western ranchers are having an inning this year and regaining some of the loss of a year ago, when feeder lambs purchased around $8 or less lost money for the grower, but returned enormous profits to cornbelt feeders. Selected lots sold last week at Chicago as high as $13, or practically equal to the top on the fat lamb market. In the last eight weeks total shipments countryward from the twelve leading markets were 354,088 head, compared with 299,022 head in the same period last year and 690,335 head two years ago. It is too early to tell how large the total movement into cornbelt feed lots will be during the season as a whole, although thus far it has not been excessive.

Expansion Due in Wheat Movement.

Receipts of wheat at primary markets increased last week after a decline of several weeks' duration. The increase was primarily at spring wheat markets, the movement to which will rise to flood-tide around the end of September. Although the tariff prevents Canadian wheat from coming to the United States, except in small dribbles, our own markets are feeling the pressure of Canadian wheat marketings through competition for the export trade. Receipts at Winnipeg have been running below 500 cars daily, thus far, but can be expected to increase to 1,000 to 1,500 cars within a few weeks.

Recently the absence of aggressive demand has been the principal factor in the trend of the market. With a substantial increase in the supply, including both United States and Canadian wheat, not far distant, a slightly lower price level will not occasion surprise. It is believed, however, that the demand also is due for some expansion before long, and that present prices are not much above the level at which the bulk of the crop can be merchandised.

Corn Crop Loses Ground.

Dry hot weather which has continued throughout August in some of the important corn growing sections caused a loss in the crop prospect of a little less than 200,000 bushels, according to comprehensive unofficial reports. The total yield on the basis of the present promise is about 7 per cent less than last year's harvest. Considering the size of the crop, the export demand, the rate of domestic distribution, the decline in farm stocks of old corn and the visible supply, the corn market is in a stronger position than any of the other coarse grains.

Receipts of corn at primary markets were heavy again last week, but were absorbed without a material decline in price.

Oats Movement Falling Behind.

Movement of oats from farms to primary markets in the last four weeks was the smallest for the corresponding season since 1911. The decline is not explainable on the grounds of a small crop, as the yield is considerably larger than last year, although below the average of recent years. Presumably the extremely low price is a factor. Because of light receipts and the strength in the corn market, oats prices have been comparatively stable in the last week or two and no decline of consequence is probable.

Cash Grain Markets.

The range of cash grain prices follows:

Kansas City—Wheat, No. 3 red, 98c @$1.01; No. 2 hard, 98c@$1.10; No. 3, 96c@$1.10.

Corn—No. 2 mixed, 54@56c; No. 2 yellow, 58½@60c.

Oats—No. 3 white, 34@34½c.

Barley—43@47c.

Omaha—Wheat, No. 2 hard, 95c@ $1.09; No. 3, 92c@$1.07.

Corn—No. 2 mixed, 51½@55c; No. 2 yellow, 53½@55c; No. 2 white, 51½@ 53c.

Oats—No. 3 white, 31@31¾c.

Rye—61½@65½c.

Hay Markets Unchanged.

The hay market is a stereotyped affair with a fair demand for best grades and very limited demand for low grades even at big discounts.

Kansas City—Prairie upland No. 1, $10.50@11.50; No. 2, $9@10; alfalfa, choice, $18@19; No. 1, $16@17.50; standard, $14@15.50; No. 2, $12@13.50; No. 1 timothy, $14.50; No. 2, $11@12; No. 1 light clover mixed, $14@14.50; No. 1 clover mixed, $12@13.50; straw, $6@6.50.

Sharp Rise in Egg Markets.

Although a moderate upward trend in the egg market was expected during the late summer months, the advance of nearly 40 per cent in values in the last few weeks was distinctly surprising.

(Turn to Page 22.)

Recent Range of Livestock Prices at Our Principal Markets.

Cattle—	Omaha.	Kansas City.	Denver.
Choice and prime heavy steers (1100 lb. up)	$10.00@10.65	$9.85@10.75	.....
Good heavy steers	8.75@10.15	8.35@10.00	.....
Medium heavy steers	7.50@ 9.50	6.90@ 8.60	$7.15@ 7.60
Common heavy steers	5.50@ 7.75	5.35@ 7.15	5.25@ 7.25
Good light steers	8.50@10.00	8.00@ 9.80	.....
Medium light steers	7.25@ 9.25	6.50@ 8.15	7.00@ 7.50
Common light steers	5.00@ 7.50	4.65@ 8.70	5.00@ 7.00
Common to choice butcher heifers	4.75@ 9.00	4.10@ 9.00	3.25@ 5.50
Common to choice butcher cows	3.75@ 7.25	3.25@ 6.15	2.75@ 4.50
Bologna and beef bulls	2.75@ 6.00	3.00@ 5.00	2.00@ 3.00
Canners and cutters, cows and heifers	2.00@ 3.75	2.00@ 3.35	1.50@ 2.50
Canner Steers	2.50@ 4.00	3.00@ 3.75	2.00@ 3.50
Common to choice feeders (1000 lb. up)	6.00@ 8.25	5.50@ 8.25	5.50@ 7.25
Common to choice feeders (750-1,000 lb.)	5.75@ 7.75	5.40@ 8.10	5.25@ 7.25
Common to choice stocker steers	5.00@ 7.75	4.25@ 7.90	4.50@ 6.50
Common to choice stocker cows and heifers	3.25@ 5.25	2.85@ 5.65	3.00@ 3.75
Hogs—			
Top of Market	$ 9.30	$ 9.25	$ 9.25
Bulk of Sales	6.75@ 9.15	8.30@ 9.15	8.50@ 9.00
Heavy (250 lb. up)	7.60@ 8.85	7.70@ 9.00	8.25@ 8.75
Medium (200—250 lbs.)	8.00@ 9.15	8.00@ 9.15	8.50@ 9.10
Light (150—200 lb.)	8.60@ 9.30	7.90@ 9.25	8.75@ 9.25
Smooth packing sows (250 lb. up)	6.75@ 7.60	6.75@ 7.50	6.75@ 7.50
Medium to choice pigs (130 lb. down)	.....	.....	7.50@ 8.00
Stock pigs	7.00@ 8.50	7.25@ 8.90	7.25@ 7.85
Sheep and Lambs—			
Medium and prime lambs 84 lb. down)	$11.50@13.00	$11.00@13.35	$10.50@12.50
Medium to choice ewes	3.50@ 6.75	4.75@ 7.26	3.75@ 6.50
Feeder lambs	10.00@12.65	.....	10.00@12.00

Dairying and Hog Raising

All letters regarding commercial and technical features of dairy farming and hog production promptly answered. Address all communications to Dairy Department, Western Farm Life, Denver, Colorado.

The states that are high in the number of purebred bulls are also high in milk production.

The short pasture season is here and the production of milk will fall off greatly unless some grain is fed as a supplement.

The butchers' block is the ultimate end of every hog or other meat animal excepting those used as breeders to improve other stock. The sooner the average breeder realizes this fact the more profit there will be in the business. Breeders cannot go on indefinitely producing animals to sell or trade to other breeders. The primary object of breeding improved stock is to place purebreds on every farm producing market stock in order that the demand for a better quality of meat may be met.

Decision Against Filled Milk.

Dairy forces of the nation are jubilant over the victory against filled milk just won in Wisconsin. The supreme court of that state on July 20 handed down a decision which upheld the constitutionality of the law passed by the state legislature in 1921. This law prohibited the manufacture and sale of compounds of skim milk and vegetable oils.

"The Wisconsin decision means a great step toward a more complete victory in the passing of a Federal act to debar these oiled milks from interstate and foreign commerce," said Charles W. Holman, executive secretary of the National Milk Producers' Federation.

A suit to test the constitutionality of the Wisconsin act was instituted by the Carnation Milk Products Company and the Hebe Company. They asked that the law be set aside as unconstitutional and that the state dairy commissioner, J. Q. Emery, be enjoined from enforcing the statute. Unless the plaintiffs appeal to the U. S. Supreme Court, the filled milk traffic in Wisconsin is at an end.

Making Future Purebred Breeders.

Membership in the Holstein Friesian Calf Club Association of America is to be given to any boy or girl in a Holstein calf club and owning a purebred calf. This membership is not given until the boy or girl has completed a season of work under a club leader with a calf duly registered in the name of a club member. The membership will continue until the boy or girl is nineteen years old. Among the benefits of this membership is the privilege of registering and transferring all animals connected with calf club work including their offspring at the regular membership rates. In addition, these junior members will receive valuable literature giving instructions on the proper handling of their calves as well as news items of interest concerning their breed. The boys and girls become candidates for this junior organization when they join their local club. At this time they receive a candidate badge and later when the local club leader and Holstein official in charge have certified to their faithful work the membership certificate is granted. Earl J. Cooper has been assigned to this work by the Holstein association.

Royal Into New Home.

After twenty-four years of tenantcy of various buildings in Kansas City, and in various parts of Kansas City, ranging from the Stock Yards to Convention Hall and on out to Electric Park, the American Royal Live Stock Show is to have its own permanent home at the Kansas City Stock Yards, which will be completed about October 1, or forty-five days before the 1922 American Royal is to open, November 18, to run one full week.

The new structure is being erected at the intersection of Twenty-third Street Trafficway and Wyoming street. The arena building proper is 425 feet long and 220 feet wide, with two floors, the arena being on the top of these two floors. The Live Stock Annex is 200 feet long and 260 feet wide and two stories high. The principal exposition building is 625 feet long, part 220 and part 260 feet wide, with a total floor space of over six acres. The oval shaped arena on the second floor of the principal building is 225 feet long and 125 feet wide, one of the largest indoor arenas in the world. A 12½-foot promenade runs around the arena and back of this are the box seats, elevated to four feet above the arena floor.

Carlots of cattle, swine and sheep will be shown in the stock yards adjoining the main exposition building. Premium lists of the 1922 show, November 18 to 25, have been issued and are ready for distribution by the secretary, F. H. Servatius, Live Stock Exchange building.

Study Provisions of Anti-Vivisection Bill.

The initiated bill known as the anti-vivisection bill which will appear on the ballot this fall is of vital importance to the livestock industry. The Colorado Agricultural College has made a careful study of the terms of the proposed bill as it affects the production of livestock and summarizes the findings as follows:

1. Its passage would stop research into animal diseases.
2. Eliminate the possibility of finding any new vaccine or serums for the treatment or prevention of disease.
3. Prevent the improvement of those we have.
4. Make it practically impossible to discover the cause of any disease the cause of which is not now known.
5. Remove the possibility of definitely proving that any forage plant was poisonous.
6. Prevent any improvement in our present methods of destroying prairie dogs.
7. Practically close the Colorado Experiment Station insofar as research into animal diseases is concerned.
8. Prevent further nutritional experiments on vitamines which have done so much to explain scurvy, beri beri, pellagra, paralysis of swine, etc.
9. Make it difficult for veterinarians to either learn or improve their surgical technique.
10. Seriously injure the livestock industry of the state.

New Method of Pasteurization.

A ten-gallon can of fresh milk treated by a new system of pasteurization was recently received in London from South Africa, according to a report sent to the Department of Commerce by the London representative. After searching practical, as well as bacteriological and chemical examinations by eminent dairy and scientific authorities, it was declared equal in flavor and attractiveness to the best English milk, and free from every trace of hurtful bacteria and chemical preservatives. Exhaustive tests also proved that the fat content rose as cream in a thoroughly normal manner and that the keeping qualities of both cream and milk were not affected up to seventy-two hours' exposure to the heat and atmosphere of a London office.

Some Livestock Don'ts.

1. Don't go into the livestock game until you have home-grown feeds in view.
2. Don't try to raise livestock without fences and forage crops.
3. Don't breed to scrub sires.
4. Don't let livestock suffer for want of shade and water.
5. Don't fail to take proper care of barnyard manure.
6. Don't fail to give the sow special care at farrowing time.
7. Don't stint the sow which is suckling pigs.
8. Don't feed unbalanced rations.
9. Don't feed irregularly.
10. Don't fail to vaccinate your hogs against cholera.
11. Don't fail to have your beef herd tested for tuberculosis.
12. Don't fail to cull out the non-producers.

Some Cow!

The following advertisement appeared a while ago in a California newspaper:

For Sale—One large, red-and-white cow, three-eighths mule and five-eighths wildcat. She usually goes on a visit every summer but is at present attached to her home by means of a log chain. To any person wishing to buy her, I will throw in the chain and sledge hammer. Would be delighted to sell this cow to some citizen of San Diego who thinks he can whip Mexico single-handed.

Feed Your Hogs MERRY WAR LYE

HOGS eat better when a little MERRY WAR LYE is mixed with their feed—and you know it takes appetite to make meat and fat. MERRY WAR LYE also tends to reduce acidity of feed—helps build up the resistance of hogs to certain diseases and helps tone them up. Thin, scrawny, sickly hogs usually improve quickly when fed MERRY WAR POWDERED LYE—even healthy hogs do better. Costs little to feed—120 feeds in every can—pays for itself many times over.

Directions For Feeding

Thoroughly dissolve a tablespoonful of MERRY WAR POWDERED LYE in a little water and mix well with feed for ten hogs or thoroughly dissolve HALF a can in water and mix with a barrel of feed. Stir well and feed night and morning. If on dry rations thoroughly dissolve HALF a can of MERRY WAR LYE in each barrel of drinking water. Follow directions carefully.

For years hog raisers have been feeding MERRY WAR LYE—they know what it will do. Profit by their experience—feed your hogs MERRY WAR LYE.

Look For The Picture of The Hog on The Label

It Is The Sign of Safety You will find it only on "MERRY WAR"—safe Lye for hogs.

Sold by Grocers, Druggists and Feed Dealers

E. MYERS LYE CO., *Established 1888.* St. Louis, Mo.

MERRY WAR LYE

SELL YOUR MILK--FEED A&C CALF MEAL

SATISFACTION GUARANTEED
OR MONEY REFUNDED

We want you to give A. & C. calf meal a fair trial. WE KNOW it will raise better calves for one-third what your milk sells for. TO PROVE IT TO YOU we want you to order 100 pounds. Any time within thirty days if you are not convinced that it will do everything we claim, we will return your money.

WE WILL SHIP DIRECT TO YOU
if your dealer does not handle it. WRITE TODAY

COSTS ONLY 1/3 WHAT YOUR MILK SELLS FOR

ADY & CROWE MER. Co. 1900 15TH STREET DENVER, COLO.

Keep Your Hogs Healthy

Plenty of water at the right temperature in zero weather keeps your hogs healthy and makes them grow faster on 25% less corn. Keep your hogs healthy this winter and save yourself work and feed. The gain your hogs make will soon pay for an

IDEAL HOG WATERER

The heavy galvanized, corrugated outer casing reinforces the Ideal to withstand roughest farmyard usage. For less than two cents a day you can give your hogs warm water and save yourself the cold job of cutting ice. The drinking trough in Ideal Waterers is inside the outer casing and protected against damage. Ideal water tank easily lifts out of the casing.

Write us for your nearest Ideal Dealer's name and our special book on Ideal Hog Waterers and other hog lot equipment,

W. W. GRISWOLD, Rocky Mtn. Agt., 1819 15th Street. Denver, Colo.

$7.50 After 30 Days Free Trial

The Belgian Melotte Separator—with the wonderful Self-Balancing Bowl. No other like it.

30 days' free trial—then, if satisfied, only $7.50 and a few easy payments—AND—the wonderful Belgian Melotte Separator is *YOURS.*

No Money Down!

Catalog tells all—*write.*

Caution! U. S. Bulletin 201 shows that vibration of the bowl causes *cream waste!* The Melotte bowl is *self-balancing.* Positively cannot get out of balance therefore cannot vibrate. Can't remix cream with milk. *The Melotte has won 26 Grand and International Prizes.*

Catalog FREE

Write for new Melotte catalog containing full description of this wonderful cream separator and the story of M. Jules Melotte, its inventor. Don't buy any separator until you have found out all you can about the Melotte and details of our 15-year guarantee which is infinitely stronger than any separator guarantee. Write TODAY.

Runs so easily, bowl spins 25 minutes after you stop cranking unless you apply brake. No other separator needs a brake. Bowl chamber is porcelain lined.

The Melotte Separator, H. B. Babcock, U.S. Mgr. Dept. 3380 2843 W. 19th Street, Chicago, Ill.
2445 Prince Ave., Berkeley, Calif.

15 Cords a Day

$81.00 4 H-P—Low Priced, F.O.B. the Factory.

Easily sawed by 1 man. Wood selling at $4 a cord would bring owner $60.00 a day.

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Log, Tree, Limb Saw. Cash, Easy Terms. Shipped from Nine Branch Houses. Free Book. OTTAWA MFG. CO. 2511 M Wood St. OTTAWA, KANS.

30 Days' Trial.

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100% PROTECTION FOR LIFE from *one* vaccination with Cutter's Liquid or Solid Blackleg Aggressin. Absolutely safe. Cutter's Solid Aggressin Injectors work just like Blackleg Pill Injectors. If Cutter's Aggressin is unobtainable locally, write

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N.B.—Old Style Powder and Pill Vaccines still made for those who prefer them.

Most Cash for Western Furs

Get Ready to Trap Now

Furs are higher. **Coyotes, Muskrats, Skunks and Wildcats,** and all other Western Furs, will bring you **More Money** this year. Get your supplies from **Stephens** and be ready to trap early.

Traps at Factory Prices

Stephens sells Traps, Animal Baits, and all Trappers' Supplies at **Rock Bottom Prices.** Western Trappers save Many Dollars and **3 to 14 Days Time** by buying from **Stephens** of Denver.

Stephens Bait Gets 'Em!

Christian Ramsey of Roswell, N. Mex., caught **24 Muskrats** with **25 Traps,** using **Stephens' Muskrat Bait.** Hundreds of Trappers do as well every year, proving **Stephens' BAIT IS BEST.**

How to Grade Furs

Learn to do it yourself. Our **Trappers' Guide** contains detailed instructions by Mr. Stephens, who has spent a lifetime in the fur business. **Free.**

Stephens charges you **No Commission** on your furs---YOU keep that yourself. All Western Trappers who ship furs to **Stephens SAVE $1 to $20** on express or parcel post; and you get your **MONEY 3 to 14 Days Quicker---BECAUSE Denver is closer to your town** than any other Important Fur Center.

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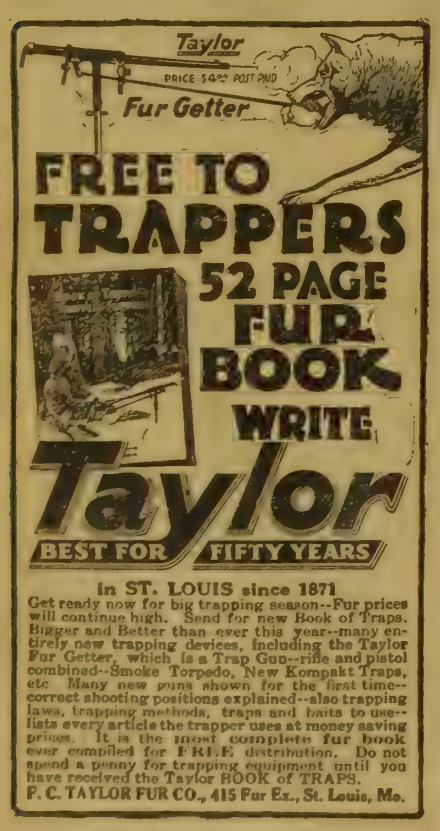

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Get ready now for big trapping season--Fur prices will continue high. Send for new Book of Traps. Bigger and Better than ever this year--many entirely new trapping devices, including the Taylor Fur Getter, which is a Trap Gun--rifle and pistol combined--Smoke Torpedo, New Kompakt Traps, etc. Many new guns shown for the first time--correct shooting positions explained--also trapping laws, trapping methods, traps and baits to use--lists every article the trapper uses at money saving prices. It is the most complete fur book ever compiled for FREE distribution. Do not spend a penny for trapping equipment until you have received the Taylor BOOK of TRAPS.

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Trappers: wants your name and address if you are going to trap or buy **FURS**

Write Fouke today—prospects very good. For best results it's important to have contact with the market information. Fouke gives it. Get the jump on the other fellow.

SEND TO-DAY

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Put my name on your mailing list for Home Market Reports and "Two Trappers Partners," the new book on how to trap and grade furs, game laws, new prices on all supplies—all FREE.

Name _____

Town _____

R. F. D. _____ Box _____

Trappers Expect Good Season.

Encouraged by the promising outlook in the fur market, old trappers are getting out their trapping sets, sizing up the "lay of the land," and preparing for a big season's catch.

If you are thinking of doing some trapping this winter—and this is an interesting and easy way to make good money—you should make your preparations now. The trapping season begins in November. Before that time arrives, you ought to have your traps in readiness, and should know just how you are going to proceed.

Trapping, especially for the common fur-bearing animals such as muskrat, skunk, coon, mink, etc., is not difficult. Many boys and men derive a substantial income from it. But it is necessary to know the habits of these animals—where they may be found, what traps to use and where to place them, the proper bait to employ and so on.

You can obtain all this information by writing to one of the big, reliable fur houses, explaining your intentions and asking for a catalog.

Staple furs such as those mentioned above are in great popularity. They bid fair to remain in fashion for many years to come, so that trapping brings rewards today that were unknown a few years ago. Trappers can look forward, therefore, to good prices for their pelts.

The vogue for fur garments and fur-trimmed attire is one of the developments of recent years. While furs have always been worn to a moderate extent, they literally took fashion by storm a few seasons ago. This led to some fantastically high prices—supply simply could not keep pace with the demand. These prices, of course, had to come down after their extraordinary flight, and this they did in 1920, putting the fur market in a turmoil for the time being.

Now the market is back on a steady footing and promises to remain so. And, even after the readjustment of prices, it leaves trapping a highly profitable occupation—much more so than it ever was during the years preceding the war. Fur houses say there is also good demand for skunk, mink, raccoon and wolf.

From all indications, it is evident that this will be a very prosperous year for trappers and for the fur business in general.

Market Outlook for Farm and Ranch Products.

(Continued from Page 20.)

Receipts have fallen off sharply and daily withdrawals from cold storage at the four leading markets are averaging about 25,000 cases.

Poultry prices have changed but little recently, but the demand does not look broad enough to absorb the heavy autumn run without a further decline.

Denver—Eggs, $5@6.50 a case. Live Poultry—Hens, 15@20c; springs, 20c; broilers, 20c; roosters, 7c; turkeys, 27c.

Butter Market in Strong Position.

Dry hot weather in some of the principal butter producing sections has reduced the market supply materially in the last two weeks, and prices have shown a pronounced upward trend. Fancy butter particularly has been scarce. A small amount has been withdrawn from cold storage, although this movement is not of much consequence as yet. The statistical position of the butter market is fairly strong since the total supply in storage is not extremely heavy and consumptive demand is considerably above the average. Prices are about 15 per cent higher than at the low time of the season a few weeks ago.

Prices for 92-score creamery butter on September 2 were: Chicago, 37c; New York, 38½c; Boston, 38c; Philadelphia, 39c.

Potato Movement Above Average.

Potato prices declined again last week. Total carlot shipments in the United States are running much above the average for the corresponding season. The movement in the week ending August 26 was 4,128 cars, compared with 3,911 cars last year, 2,837 cars two years ago, and 3,662 cars three years ago. New Jersey is the principal shipper at present, although the northern states are showing a steady increase. Sacked cobblers are quoted at $1.35 to $1.85 per 100 pounds in consuming markets. Early Ohios are bringing $1.10 to $1.65.

Extremely low prices have checked the movement of apples and markets have been more firm recently. Jonathans, Wealthies and Oldenburgs are quoted at $2.50 to $3.50 per barrel in the leading consuming markets.

LIVESTOCK NOTES.

C. N. HENRY, Fieldman.

Great Orion Sensation Again heads the herd of Durocs owned by the Range View Farm, Henderson, Colo. He is the son of Great Orion Sensation, fifteen months old, weighs 1,50 pounds, is the sire of a fine bunch of eighty spring pigs. He was Junior boar at the National Western Stock Show, 1922. The Range View Farm will show their herd of Durocs this fall at the fairs at Brighton, Rocky Ford and Pueblo.

A complete dispersal of the Whowell & Polly Hostein Friesian herd will be held at the farm on November 22, at Johnstown, Colo. About eighty head will be sold. This is one of the highest testing herds in the West. These cows have been under test for two years and some of the cows have 32½ pounds of butter for seven days, and 20,000 pounds of milk for 365 days. Thirty-five A. R. O. cows and a fine lot of heifers and eight or ten fine young bulls are included in the offering. The herd is under Federal supervision for tuberculosis eradication. Get your name on the mailing list for catalog. Address Walter B. Polly, Mgr., Johnstown, Colo.

One of the good herds of Hampshire hogs in Colorado will be found on Mr. Frink's farm at Fort Lupton. The herd is headed by Pershing's Dream and he is siring a fine lot of pigs. Mr. Frink has a wonderful herd of sows and has a fine lot of fall pigs coming on. Just keep Mr. Frink and his herd in mind.

Durocs in Pueblo County.

Some of the live-wire Duroc breeders of Colorado are found in Pueblo county. C. F. Burke, manager of the Blue Ribbon Stock Farm, is one of the real ones. At the Blue Ribbon Farm will be found a real bunch of herd boars, and the best blood lines will be found in both the boars and sows and a fine lot of spring pigs. Mr. Stone, a near neighbor, is also a Duroc breeder with some real hogs. He has a young boar with lots of quality and which he is developing into a real herd boar. Some gilts are being fitted for the shows. Mr. Stone also has a fine herd of Guernsey cattle. E. D. Hardman, east of Pueblo, is getting in the top row and is going to develop a real herd of Durocs, for he believes in hogs and corn as one of the paying lines of farming. R. D. Russler, further on down the valley, has one of the real herd boars of the country. He has some fine sows in his herd that are real mothers. While not a Duroc breeder, Mr. Hudspeth has a fine herd of Holstein cows and is a strong believer in good cattle and better livestock of all kinds.

MISCELLANEOUS.

LARIMER BOX AND BARREL CO.—BARRELS, kegs, fruit packages, baskets of all kinds. 1016 Larimer st. Main 7088. Denver, Colo.

CABBAGE AND VEGETABLE CUTTER—SIX knives, prepaid, $1; three for $2. One free to secretary Ladies' Aids. Lusher Bros., Elkhart, Ind.

SCENARIOS WANTED—DIRECT STUDIO SERvice; membership now open to talented amateurs Address Sec. American Screenwriters' Society, 5821 Santa Monica Blvd., Hollywood, Calif.

SEND FOR OUR WHOLESALE WEEKLY PRICE lists; it will keep you posted on the rock-bottom prices, and will help you save from 25 to 40 per cent on your supplies. Stock Growers Wholesale Supply Co., 1523 19th St., P. O. Box 1442, Denver, Colo.

PATENTS—BOOKLET FREE. HIGHEST REFerences. Best results. Promptness assured. Send model or drawing for examination and opinion. Watson E. Coleman, Patent Attorney, 624 F St., Washington, D. C.

LET US TAN YOUR HIDE—COW AND HORSE hides for fur coats and robes. Cow and steer hides into harness or sole leather. Catalog on request. We repair and remodel worn furs; estimates furnished. The Crosby Frisian Fur Co., Rochester, N. Y.

AUTOMOTIVE TRADES TAUGHT—DENVER INstitute of Technology guarantees satisfaction teaching following trades: Automobile and tractor repair, automotive electricity, storage batteries, welding, vulcanizing; 15 years' experience. Write for booklets. Y. M. C. A., Denver.

NURSES TRAINING SCHOOL—PARK AVE. HOSpital, Denver, Colo., offers a thorough training to young women desirous of becoming professional nurses. This is a fully accredited school. Course is three years. During training students receive full maintenance, tuition and all uniforms; also money allowance of $6 per month to cover other hospital needs. Apply Supt. of Nurses, Park Ave. and Humboldt Sts., Denver, Colo.

HONEY.

"THEBESTO ROCKY MOUNTAIN HONEY," none better; satisfaction guaranteed or money back; five-pound can, postpaid $1.50. Send remittance with order. Write for price on large quantities. The Colorado Honey Producers Association, Denver, Colo.

KODAK FINISHING.

KODAK FILMS DEVELOPED FREE. PRINTS 2½c each. Kodak Studio, Denison, Texas.

ARMY GOODS.

SALVAGE AND SURPLUS SALE OF ARMY goods. Post Army Store, 921 18th St., Denver, Colo. Write for price list.

SALVAGE AND SURPLUS SALE OF ARMY goods. Denver Army Store, 1443 Larimer st., Denver, Colo. Write for price list.

TOBACCO.

NATURAL LEAF TOBACCO — CHEWING, 5 pounds, $2, 10 pounds, 3. Smoking, 10 pounds, $2, postpaid. John Tilley, Dresden, Tenn.

NATURAL LEAF TOBACCO — CHEWING, 5 LBS., $1.75; 15 lbs., $4. Smoking, 5 lbs., $1.25; 15 lbs., $3. Send no money, pay when received. Farmers' Tobacco Assn., Paducah, Ky.

TOBACCO — NATURAL LEAF. CHEWING, 5 pounds, $2, 10 pounds, $3. Smoking, 10 pounds, pounds, $1.25; 20 pounds, $4. Send no money. Pay when received. Tobacco Growers' Union, Paducah, Ky.

KENTUCKY TOBACCO—3-YEAR OLD LEAF— Don't send a penny, pay for tobacco and postage when received. Extra fine, chewing, 10 lbs., $3; smoking, 10 lbs., $2.50; medium smoking, 10 lbs., $1.25. Farmers' Union, Hawesville, Ky.

WESTERN CANADA for Stock Raising

Vast stretches of undeveloped fertile agricultural land of the highest productiveness await the settler in Western Canada. The land possesses the same character of soil as that which has produced the high quality of cereals that have carried off the world's premier honors so many times. **Native grasses are Rich and Abundant.** Cattle fattens on them without any grain being fed.

The place for the man with limited capital to overcome difficulties of high priced land or the burden of heavy rents is in Western Canada—where *land is cheap,* where a home may be made at low cost, and where *dairying, mixed farming and stock raising are particularly profitable.*

Homestead of 160 acres in the more remote districts **FREE to settlers.**

For illustrated literature, maps, description of farm opportunities in Manitoba, Saskatchewan, Alberta and British Columbia, reduced railway rates, etc., write to

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"Midget" Marvel

Self-Contained Roller Flour Mill

Saves the high freights on wheat out and flour and feed in. "The first eight months I made a net profit of over $8000," says A. H. Ling, Jetmore, Kan.; "My profits from the "Midget" Marvel average right around $40 per day," Chas. M. McKinney, Cooper, Tex.; "Was $6000 in debt when I bought my 25 barrel "Midget," and the little mill pulled me clean out of the hole long before I bought my 40 barrel mill from you," says M. A. Kamm, Oxford, Mich.

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A Design For Every Practical Purpose

Your dealer can supply this scientifically built Fence. Write us for name of dealer in your vicinity.

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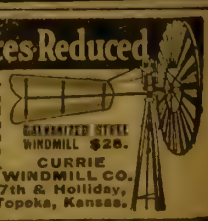

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EIGHTY ACRES, ALL TILLAGE, NEAR MARkets, big producers. A Colorado opportunity that should not be overlooked by you; on main road, only 4 miles depot, high school, creamery, short ride Denver markets; every acre loamy fertile soil, nicely fenced, comfortable 4-room cottage, cellar, porch, well and spring water, picturesque view, 10-cow barn; 120 acres leased pasture land adjoining. Incapacitated owner; all for $2,300; easy first payment; possession now. Wm. J. Prost, Strout Farm Agency, Elizabeth, Colo.

FOR SALE—IN RIO GRANDE COUNTY, COLO. Half section improved ranch; 75 acres potatoes, balance grain and field peas, excepting 100 acres to be summer plowed; price, $85 per acre, including water rights for abundance of water. Also 3 quarters and one 80 in one section three miles from above, ready for plow, including water right, $50 per acre; all smooth, level land and would guarantee land to produce 150 to 200 sacks potatoes per acre. If buyer desires, will sell livestock and farm implements. Want to take advantage of business opportunity and will sell for small cash payment; name your own terms on balance. Possession any time. M. J. Beausang, Owner, 1578 Emerson St., Denver, Colo.

IRRIGATED FARMS NEAR DENVER—GOING TO California and will close out at very low price and easy terms, several improved farms under good ditches, 20 to 30 miles of Denver and near railroads.

142 acres, one mile to depot, elevator and beet dump, rural route and milk route by the door. All under ditch, good water right; new six-room house; barn and outbuildings; half in alfalfa, 10 acres pasture with running water, no seepage. Refused $250 per acre two years ago, but price now $140 per acre; $2,500 cash, balance easy terms. Possession this fall.

60 acres irrigated, 5-room house, barn, good well; half mile to school, 3½ miles to town; all level, all in crop; no waste; rural route and milk route by the door. Cheap pasture land with running water across road, can be rented cheap. Fine dairy proposition. Price $125 per acre; $1,500 cash, balance easy terms. Possession this fall.

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$210 MONTHLY, EXPENSES, FREE AUTO TO agents selling our poultry and stock remedies; fast summer sellers. Sunflower Poultry Farm, B. 10, Parsons, Kan.

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AMBITIOUS MEN—WRITE TODAY FOR ATtractive proposition, selling subscriptions to America's most popular automobile and sportsman's magazines. Quick sales. Big profits. Pleasant work. Digest Publishing Co., 9659 Butler Bldg., Cincinnati, Ohio.

$50.00 WEEKLY—MEN, WOMEN, TAKE ORders for American Guaranteed Hosiery. All styles, colors for men, women, children. Silk hose guaranteed against runners. Experience unnecessary. Write today for territory and samples. American Hosiery Mills, Dayton, Ohio.

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HUNDREDS U. S. GOVERNMENT POSITIONS continually open to men-women over 17; $92—$190 month. Quick, steady raise; paid vacation; no strikes; steady work; short hours. Common education sufficient, "pull" unnecessary. Write immediately for list positions. Franklin Institute, Dept. J 123, Rochester, N. Y.

FOLLOW THE DOLLARS—$50 TO $100 PER week, the money yours; something new, not an old, worn-out proposition; field untouched; experience unnecessary; takes everybody by storm; money rolls in; show 50, sell 40; demonstrated in one minute; sells on demonstration; the new Inkless Fountain Pen, the twentieth century wonder; never leaks or spills; with this pen no more use for the ink bottle; sample pen 50c; this proposition is 18 karat; money back if not as represented; agent's profit 200 per cent; exclusive territory; send for agency today. Inkless Fountain Pen Co., 1522 Eighth st., Des Moines, Ia.

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FIR LUMBER, MILLWORK, RED CEDAR SHINgles, fence posts, from mills to you. Send bill for delivered prices. Lansdown, Box 909M, Everett, Wash.

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RANGE BULLS—REGISTERED HEREFORDS and Shorthorns. The Lowell Purebred Cattle Co., Union Stock Yards, Denver.

WHY PAY MORE? PUREBRED REGISTERED Holstein heifer calves, $50. Circulars free. Condon's Holstein Parks, West Chester, Ohio.

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HIGH-CLASS REGISTERED DUROC BOARS BY Great Giant Sensation. Delbert Hawkins, Peetz, Colo.

SHEEP.

FOR SALE—200 CHOICE SHROPSHIRE BREEDing ewes. R. B. Golden, Nunn, Colo.

RAISE KARAKUL SHEEP, PRODUCING PERsian lamb Astrakhan fur. Two lambings yearly. Dr. Young, Hoff-Schroeder, 1545 Welton st., Denver, Colo.

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SWISS MILCH GOATS, HIGH-GRADE STOCK; milking from three to five quarts; also young stock. Frank Rauchfuss, R. D., Edgewater, Colo.

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APRIL HATCHED BROWN LEGHORN COCKerels, 75c each. Richard Matoush, Julesburg, Colo.

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INSTRUCTIONS ON RAISING TURKEYS—RIDding of lice, cureing Blackhead and cause of it. All for $1. Now is the time to buy some of these 20-pound Mammoth Bronze hens, while you can get them cheap. Sunnydale Poultry Farm, Keystone, Nebr.

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ALFALFA SEED, 95% PURE, $6 BUSHEL, sacks free, track Concordia. Geo. Bowman, Concordia, Kan.

KANRED SEED WHEAT, RECLEANED, $2.25 per bushel, sacked. Kanota oats, $1.25. Taylor & Sons, Chapman, Kan.

FOR SALE—CERTIFIED KANRED WHEAT; 25-acre field averaged over 50 bu. Price $2 per hundred. A. C. Given, Route 6, Denver, Colo. Phone Englewood 294 R 12.

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MISCELLANEOUS

INVENTIONS WANTED—CASH OR ROYALTY for ideas. Adam Fisher Mfg. Co., 204, St. Louis, Mo.

GUARANTEED BETTER BUTTER WRAPPERS— 100, 60c; 250, $1.50; 500, $2.50; 1,000, $4.25, printed to order. Home Specialty Co., Middleton, Idaho.

Additional Classified Page 22

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Cows from Polled Plato, herd headed by POLLED SUCCESS A 3rd. Young bulls and heifers for sale.

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We offer you a wonderful amount of these Holstein qualities—and from a clean herd. Bull calves from fine record dams. Pahgre Valley Ranch, Loesch Bros., Montrose, Colo.
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We have bred hundreds of prize-winning and high-producing Holstein cows, including
Tilly Alcartra
We can supply you with that same line of breeding. Write
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BUCHANAN & HENRY,
LIVESTOCK
AUCTIONEERS
1927 Broadway Denver, Colo.
Write us, or Phone Champa 4655.

BLUE RIBBON HERD
DUROCS

Buy them young and grow them yourself Weaned pigs, regular price $25 to $50. Our specialty for short time on good farmers' boars, weaners, $15 and $20. Show prospects, weaners, $50. Are breeding now for fall farrow. Can sell you one or a carload. Our Blue Ribbon herd was the high winner at Denver. Write today.
The Blue Ribbon Live Stock Co.
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HAMPSHIRE HOGS
We make a specialty of furnishing foundation herds. We have Show and Herd Boar prospects for sale, that combine the blood of the greatest show hogs ever produced. LOOFOUTS, WICKWARES and TIPTONS, the three greatest strains known to the breed. For free booklet, prices and description write to
N. E. Mosher & Son, Hugo, Colo.

Mather's Big-Type Polands
sold to breeders in four states this year are giving satisfaction.
CHOICE YOUNG BOARS
at prices that will surprise you.
C. J. Mather, Longmont, Colo.

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Just a few real herd headers left ready to go at pre-war prices. Used with grade sows even, they will more than pay for themselves on the first crop of pigs. Write today.
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Livestock Auctioneer and Duroc Breeder.

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The greatest individual lot of spring boars at moderate prices, to close out early. Now is your time to buy.
Write for full particulars, etc.
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We offer sows and gilts bred to a great son of an International Grand Champion. Also serviceable boar and weanlings, both sexes.
Prices and description on request.
D. C. FULLER & SON,
FIRST VIEW, COLO.

C. A. C. QUALITY STOCK.
In picking your Shorthorn breeding stock, remember
SNOW KING
breeding has proved itself in the show ring. Lord Douglas calves out of Snow King heifers are even better. We will have some bulls of this breeding for sale this summer.
COLORADO AGRICULTURAL COLLEGE,
Fort Collins, Colorado.

OUTSTANDING HOLSTEIN BULL
We have for sale a yearling son of a three-year-old heifer who made 1,035 lbs. butter last year and 21,428 lbs. milk, making her fifth in the world for butter production and ninth for milk for the year 1921-1922. The bull calf is sired by a 30-lb. son of Johan Duchess De Kol Lad, a bull who has two world record sisters, and two world record daughters. Calf is mostly white and a beautiful individual.
WRITE FOR PRICE.
WHICH IS REASONABLE.
Mrs. R. G. Douglas, Rush, Colo.

Sam Ball Shorthorns
Are the big hardy kind that make good under the most trying range conditions. At the head of the herd is
Big Sandy

From this herd came the sires of the grand champion carlot steers at the 1920, 1921 National Western. TWENTY BULLS, 2, 3 AND 4 YEARS OLD, THAT WE WILL SACRIFICE IF TAKEN AT ONCE.
SAMUEL BALL, WRAY, COLO.

Buy a Calf Out of This Herd
Twenty cows in this herd on an official seven-day test averaged 446.13 lbs. of milk and 20.19 lbs. of butter.
COLORADO STATE HOME,
2305 S. Wash. St. Denver, Colo.

Milking Shorthorns

POLLY *Sells in*
PUBLIC SALE, October 14th, 1922.
SALE INCLUDES:
ROSE SHARON...8884.4 lbs., 1st calf
ABIGAIL.....8606.1 lbs., 2nd calf
LADY WASHINGTON.....10,041.4 lbs.
Several cows exceeding 1,000 lbs. per month in tests now running. Many show-ring winners.
Two sons of Kirklevington's King, International Grand Champion.
Select young cows and bred heifers. A buyer can get a carload of The Right Kind.
TRUE "DOUBLE-DECKERS"
PROVED PRODUCTION.
BEST BREEDING.
Send today for Catalog.
BONVUE FARMS,
DENVER, COLORADO.

Shorthorns That Milk
ARE MONEY MAKERS.

A herd that will give you a good monthly cash income is what you will need in the future. One of our young bulls from a Record of Merit cow can develop your herd into a dual-purpose paying proposition.
We know the war is over and have bulls for sale at prices that you farmers and ranchmen can afford to buy. Write for our bargain list and easy payment plan.
We also have several young bulls for sale, priced to sell.
THE PINE VALLEY DAIRY & FARMS CO.
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Bates Shorthorns
are the foundation blood of true Milking Shorthorns. We have them. A few bulls for sale.
THE CARPENTER CATTLE CO.
GREELEY, COLORADO

Buy MILKING SHORTHORNS
from the oldest established herd in the state.
We can supply your needs in bulls of beef type either horned or polled Shorthorns.
Write Superintendent for folder on breeding and prices.
State Industrial School,
Golden, Colo.

GREAT BARGAINS, 960 HEAD HEREFORDS, SHORTHORNS, ABERDEEN ANGUS
1, 2, 3, 4 and 5 years old. Cows, heifers and bulls. Prices $75 to $120 and up. Percheron and Belgian horses, stallions, mares and colts, 1 to 6 years old. Prices $[illegible] up per head. One head or a carlot. Br[illegible] guarantees with each. Registered pe[illegible] mail. Stock on twenty farms in I[illegible] Illinois. Write for circular and pa[illegible] Address ILLINOIS HORSE & CATTLE CO., Good Block, Des Moines, Iowa.

Digestible cooking for your Children

One daily aid—

RECENT SCHOOL INVESTIGATIONS invest mother's cooking with a new importance.

Thousands of boys and girls in many different schools have recently been examined under the direction of nutrition experts. About one-third of these school children were found to be under-nourished. And a substantial share of them were from prosperous families. Almost uniformly it was found that the misunderstood "backward" pupils were under-nourished while the "bright" boys and girls were those fortunate children whose home kitchens supplied good wholesome food.

Well-informed mothers, nowadays, know that their families must have fats in their diet, for fat is our chief energy food. But the *digestibility* of the fat used is important. Crisco, a pure vegetable fat, supplies this necessary energy in a form which is digestible. It is wholesome for the little ones—and grown-ups as well.

We have recently had the fine, helpful experience of talking to hundreds of mothers in their own homes.

They commended Crisco generously for its delicious results in cake-making, in pie-making and in frying. A remark often heard was, "Crisco brings out the natural flavors of foods." But we were disappointed to find that many women had overlooked the great importance of *digestibility.*

Women, after all, are the real custodians of the health of their husbands and children. They feel this high responsibility and are glad (once they appreciate the digestibility of Crisco foods) to pay the few extra cents involved in an average week's baking and frying. There is real comfort in knowing that you are providing your family with nature's digestible vegetable shortening when you employ Crisco.

Crisco is sold by grocers in small, medium sized and large cans. Made and sold in Canada, too.

CRISCO SPONGE CAKE

3 eggs
1 cupful sugar
½ cupful Crisco
½ teaspoonful salt
1¼ cupfuls flour
2 teaspoonfuls baking powder
½ teaspoonful orange extract
½ cupful cold water

Cream Crisco; add salt, yolks of eggs well beaten and sugar, and beat for five minutes, add orange extract and cold water. Beat up whites of eggs to a stiff froth and add alternately with the flour sifted with the baking powder. Divide into Criscoed and floured gem pans and bake in a moderate oven for fifteen minutes.

Sufficient for twelve cakes.

To receive "A Calendar of Dinners" containing 615 recipes and 365 dinner menus, send 25c to The Procter & Gamble Co., Cincinnati, O., Section U-9, Dept. of Home Economics.

Two Simple Home Tests!

Low Melting Point. Easy Digestibility.

Into half a glass of lukewarm water drop a small lump each of Crisco and any other fat. With a teaspoon gradually add hot water until Crisco melts. You will find that few other fats melt at this point. Food authorities say that an easily digested fat should melt near body heat—98⅗ degrees. Crisco, you will find, melts even below this temperature. It melts at 97 degrees. (This test does not necessarily condemn the digestibility of the other fat, but it will aid you to establish Crisco's fine digestibility.)

Avoid Smoke and Odor!

Put into separate pans equal amounts of Crisco and any other fat. Heat slowly for eight minutes, or until they reach a temperature where a bread crumb browns in 40 seconds.

Notice that the Crisco, unlike most cooking fats, does not smoke at this proper frying temperature.

You will find Crisco very welcome in your kitchen as an aid in keeping your whole house fresh and free from cooking odors.

Digestible Vegetable Shortening

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Water Supply of Prime Importance on the Stock Farm—Page 3

WESTERN Farm Life

Vol. XXIV. *Denver, Colo., October 1, 1922.* *Semi-Monthly*

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The Rural Household
Profitable Farm Poultry
The First American (A Serial Story)
Colorado Produces Large Crop
Grangers Warned Against Anti-Vivisection Bill

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PROPER lubrication of your tractor will insure satisfactory results. It insures the reduction of maintenance, the lowering of repair bills, and long life of the engine.

Many tractors have been ruined by the use of wrong or inferior oils. By following the Lubrication Chart and using Mutual Oil, made especially to withstand Heavy Duty tractor service, you are insured proper lubricants.

Mutual Dealers and Tank Stations can supply you.

You should be able to obtain any of the Mutual Products in your community. If you cannot, write us.

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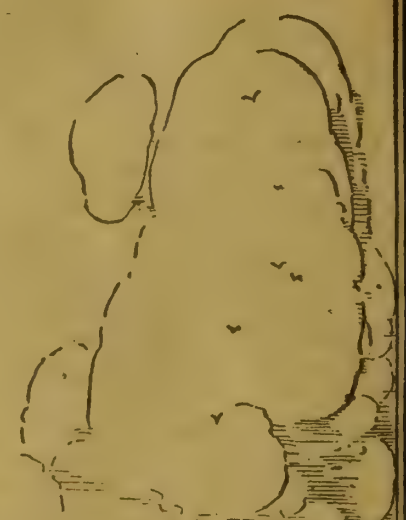

MUTUAL OIL COMPANY
PRODUCERS ~ REFINERS ~ MARKETERS
DENVER COLORADO

There's a Mutual Dealer or a Mutual Tank Station in your town.

Colorado Produces Large Crop

COMBINED GRAIN SEVEN AND A HALF MILLION BUSHELS IN EXCESS OF 1921.

A COMBINED production of wheat, oats, corn, barley and rye, totaling 58,731,000 bushels, is the estimate for Colorado by the Co-Operative Crop Reporting Service based on September 1 conditions. This is 7,309,000 bushels in excess of the total production of last year. Due to local showers over most of the state, and good rains in the east and west, the late growing crops such as corn and beans, showed some improvement during August. The total wheat crop is now estimated at 23,597,000 bushels, compared with the final estimate of 23,239,000 bushels last year. The corn crop is placed at 21,792,000 bushels, estimated on the basis that the total acreage of corn is regarded as harvested for grain. Last year the total production was 15,979,000 bushels. The final outturn will depend upon how early or late killing frosts occur.

Shrinkage in Hay Production.

The prospects of the hay crop for the state are nearly 500,000 tons (17 per cent) less than the crop harvested in 1921 and about 558,000 tons less than the average for the past three years. The condition is about 80 per cent of normal as compared with 91 per cent, the ten-year average. The crop is unusually short in north central Colorado, where high prices are now prevailing. In the six inter-mountain states including Colorado, New Mexico, Arizona, Utah and Nevada, the September 1 estimate of the hay crop is 7,134,000 tons or about 240,000 tons less than last year. The United States hay crop is estimated at 108,736,000 tons (6.3 per cent above the average for the past three years), compared with 97,000,000 tons harvested last year, and 103,000,000 tons, the average for the past three years.

Pastures Improved by Rains.

Colorado pastures improved five points during August and had a condition of 75 on September 1, compared with 98 per cent the same date last year, and 89 per cent, the ten-year average. There has generally been a deficiency of moisture throughout the season. Light showers during the past month were responsible for the improvement.

The number of stock hogs for fattening purposes in Colorado on September 1 is estimated at 232,000, or 15 per cent increase over last year. The national supply increased 7 per cent and totals 60,050,000.

Record Potato Crop.

Notwithstanding that Colorado potatoes declined three points during last month, the 18,000,000-bushel crop still promises to be the largest crop in the history of the state, according to estimates by the United States Bureau of Agricultural Economics co-operating with the Colorado State Board of Immigration. The high production is due to the much larger acreage planted (150,000 acres) this season than heretofore. The condition of the crop September 1 was 78 per cent of normal, compared with 89 per cent last year, and 80 per cent, the ten-year average for September 1.

Insufficient irrigation water, light rainfall, high temperatures and disease in some sections are largely responsible for the reduction. The estimated production is placed at 18,014,000 bushels, compared with 11,070,000 bushels last year on 90,000 acres. The United States crop is estimated at 438,398,000 bushels or about 90,000,000 bushels more than were harvested in 1921. The condition of the crop was 79.9 per cent of normal as compared with 81.3 per cent, the ten-year average.

Increased Bean Production.

The field bean crop for the state improved three points during August, the condition on September 1 being 78 per cent, compared with 92 per cent a year ago, and 84 per cent, the ten-year average for this date. The production is placed at 718,000 bushels, compared to 342,000 bushels last year. The increase in production is due to the planting of a very much larger acreage, or about 92,000 acres for harvest, compared with 38,000 acres last year. The United States crop—six principal states—is estimated at 12,500,000 bushels this year, compared with 9,118,000 last year.

The fruit crops of the state will promise generally higher production than usual. The apple crop is estimated at 4,000,000 bushels, compared with 3,200,000 last year. The peach crop is placed at 900,000 bushels, compared with 860,000 bushels in 1921. The outlook for pears is about 401,000 bushels.

Truck Crop Acreage Increased.

Truck crops are generally doing well; there was a heavy increase in the acreages this year devoted to head lettuce, onions, cabbage, and cantaloupes. Lettuce and cantaloupes are moving freely in carlots. Cantaloupes are going largely on consignment and are of excellent quality. Prices for wagon-load sales, standards, 85 cents to $1; flats, 40 to 55 cents.

Colorado sugar beet production is placed at 1,635,000 tons this year, about the same as in 1919, but 24 per cent less than last year. The United States crop is figured at 5,260,000 tons, 32.4 per cent less than last year, and 20.5 per cent less than the 1916-20 five-year average.

The soil condition as indicated by moisture supply in the soil is only 76, compared with 74 on August 1, and 100.7 last year on September 1, and 100.1 September 1, 1920.

Grangers Warned Against Anti-Vivisection Bill.

The Grange can truthfully boast that in all its history as an organization it has been on the right side of practically every great question of public policy. The Colorado Grange is now warning members in Colorado against the so-called anti-vivisection bill. Through the official action of its legislative committee, consisting of C. W. Swayze, John T. Glasier, Frank O. Graves, John Morris and Rudolph Johnson, the following letter has been sent to every Grange member in the state:

"You will be called upon to vote on an initiated measure in the election this fall, a measure that is of paramount importance to the people of this state. This measure is directed at animal experimentation and is called the anti-vivisection bill.

"It is important that the voters of the state understand the real nature of this bill. The anti-vivisectionists propose to do away with all animal experimentation. This would mean that it would be impossible to manufacture anti-toxins and various serums which have made many diseases like diphtheria, smallpox, typhoid, etc., less dreaded than they formerly were. Modern civilization could not have developed as it has, had it not been for animal experimentation and consequent discovery of the causes of disease and means of their control.

"The defeat of the bill is of vital importance to the farmers of this state, for the measure has been drawn so that if it passes it will be illegal to castrate an animal. Further, it will be illegal to manufacture the anti-toxins and serums which have been used so successfully in controlling diseases of our domestic animals, such as hog cholera, black leg, etc., and which result in the saving of millions of dollars every year to the farmers of this country.

Do not be misled by the false sentimentality that lurks in the anti-vivisectionists' initiated measure. The enactment of this measure into law would not only affect your pocketbook, but would leave you and those dearest to you at the mercy of chance when dreaded diseases come along."

River Flow Increases.

Rivers and streams are ordinarily expected to decrease in flow and become smaller as forest lands are cleared. In Colorado the South Platte river is doing the opposite and becoming a larger stream. This is because of return water from irrigation ditches, seepage water, storing of water in reservoirs which eventually finds its way into the river. Measurements by the Federal government and the Colorado experiment station at Julesburg show that the return flow of water to the river was less than 200 cubic feet a second in 1890. By 1919-20 it had increased to 750 cubic feet a second. As the science of irrigation develops there will be less waste of water in all our streams due to storage provisions and the adoption of more efficient methods of using water.

Western Farm Life

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Water Supply of Prime Importance on Stock Farm

FORCING ANIMALS TO DRINK THROUGH HOLE IN ICE BRINGS MONEY LOSS

George C. Wheeler.

Provide Plenty of Water for Stock and Save Feed.

NOTHING more quickly reduces milk flow in winter weather than forcing cows to drink ice-cold water. They simply will not drink enough to carry on the normal functions of nutrition and milk secretion.

High producing milk cows drink from 35 to 40 gallons of water daily. For every pound of milk produced, cows require 4.6 pounds of water. Cows in milk need four times as much water as dry cows.

Dairymen should figure on providing as an average, 12 gallons of water daily to each animal in the herd, and it should be convenient, sheltered from cold winds and of comfortable temperature.

Hogs seldom drink enough water in cold weather. Water requirements for best results range from 12 pounds daily to the 100 pounds weight at weaning time to 4 pounds daily to the 100 pounds during the fattening period.

Fattening hogs consume 7 to 8 pounds of water for each pound of dry feed, nearly twice as much as horses or stock cattle. They drink only a little at a time, but drink often if water is convenient and not icy cold.

While eating, a fattening hog will frequently leave the feed for a swallow or two of water. Water is the one thing essential to nutrition which is cheap. Supplying an abundance of pure water saves feed.

HOGS having all the water they want and just when they want it will put on 15 to 25 per cent more gain from a given amount of grain than hogs not having free access to water. This is the statement of a hog man who would not think of raising and feeding hogs without making provision for an abundance of pure water, available at all times. "Hogs require lots of water," says this man. "They drink only a little at a time, but drink frequently. They drink almost as often at night as during the day. The average hog grower may not know this, but it is a fact. Even in the coldest weather hogs will drink three or four times during the night if the water is near and is of the right temperature." Thus speaks a man of long experience in raising and feeding hogs.

Water Essential to Nutrition.

Water is so common that its importance is often overlooked. Animals can live much longer without food than without water. A hog will live and even increase in weight four or five days with practically no food if he is given all the water he wants, but he will begin to lose weight in two days if no water is given, even though fed all the corn he will eat. While not spoken of as a nutrient, water is absolutely essential to all the processes of nutrition. Mastication, digestion, absorption, and assimilation cannot proceed normally without water. It is the common carrier of the body. Without water waste matter accumulates in the digestive tract, the blood thickens and the body becomes fevered. It is well known by all stockmen that failure of the water supply in a dry summer period forces cattle to market much more quickly than the shortage of grass.

During hot weather water performs an added function in keeping the body temperature down to normal, and we are likely to regard this as its most important use and not make proper provision to get enough water in cold weather. It is astonishing how much water is required for the various forms of animal production. A shortage of water will more quickly cut down the milk flow of a dairy herd than a shortage of feed. Professor Eckles, formerly of the Missouri experiment station, found as a result of careful tests that high producing cows, those giving 90 to 100 pounds of milk daily, drank from 216 to 307 pounds of water daily, or 35 or 40 gallons. His study showed that cows in milk required four times as much water as dry cows. At the Geneva experiment station of New York, it was found that for every pound of milk produced, cows drank or consumed in their feed 4.6 pounds of water. It can readily be seen that cutting down the water supply or providing only ice water, which means that the animals will themselves reduce the amount consumed, will invariably lower the milk production.

Water Important in Dairying.

The dairyman should figure that on an average he must provide twelve gallons of water daily for each animal in his herd, and it must be close at hand and of a comfortable temperature. The man who boasts of a stream to which his cows can go daily for their water will find that in cold, windy weather they will not drink enough to keep up the milk flow. In fact, in very stormy weather cows will often not go to the watering place at all unless forced to do so. A well, conveniently located, equipped with a gasoline engine and a pump, and, when water must be stored in some quantity, provision to keep it at comfortable temperature, will be far better than the stream to which the animals must travel no matter how cold or stormy it may be.

Water taken into the animal body must be raised to the body temperature. Ordinarily there is enough surplus or waste heat generated in the bodies of well fed animals in the processes of digestion and assimilation so that no extra feed need be consumed to warm the water, but when large quantities of ice cold water are taken into the body there may be such a sudden demand for heat that extra feed must actually be diverted to warming the water, or reserve body tissue consumed.

Who has not seen cattle and other animals in winter take a sip of water through a hole in the ice and then stretch their mouths, work their jaws and give other evidences of their discomfort in being compelled to drink the icy cold liquid.

Hogs Often Suffer for Water.

Hogs often suffer for water in cold weather. Professor Dietrich of the Illinois experiment station gave much careful study to this question of the water requirements of hogs, and came to the conclusion that from 12 pounds daily to the 100 pounds of weight at weaning time, to 4 pounds to the 100 pounds daily during the fattening period was essential to the best results. He maintained that hogs do not usually dring enough water in cold weather and recommended that they be encouraged to drink more by giving it warm or in the form of warm slop.

Few farms have adequate provision for keeping water warm. Young growing hogs and brood sows should never be given ice-cold water. They cannot thrive nor make good growth if compelled to chill the entire body two or three times daily with cold water. A hog consumes from seven to eight pounds of water for each pound of dry feed eaten, or nearly twice as much as horses or stock and feeding cattle. A hog will frequently leave his feed and take a few swallows of water if it is convenient and of the right temperature. Water is the one thing essential to proper nutrition which is cheap—corn and other feed cost money. Supplying pure water in abundance saves feed.

Watering Hogs Automatically.

An automatic hog waterer will save its cost in time and labor in a very short time. Watering hogs in an ordinary trough requires lots of time and wastes water, for in hot weather the hogs will lie in the trough if there is any way to get into it. It is necessary to water then at least three times a day. In cold weather there is no more disagreeable or unsatisfactory task than to try and keep hogs watered as they should be. By using an automatic waterer having a device for keeping the water warm there is nothing to do except to keep it filled and it does not take a tenth part of the time required to chop the ice out of troughs and tanks, and then only have water before the hogs for a few minutes two or three times a day. Probably one of the most frequent reasons for failure to get good results in growing and feeding out fall pigs is the lack of a suitable water supply. There are now waterers on the market that get away from this problem of fighting ice all winter.

There is no more important question for the livestock farmer to solve than that of providing an abundant supply of pure water for all classes of stock, and particularly during the winter season. The real livestock man in hunting a new location invariably will first investigate the water supply. If he can have the water so located as to be conveniently carried to his yards and feeding pens by force of gravity so much the better, but water he must have if he is to succeed with livestock. During the winter season there must be facilities for keeping the water at a suitable temperature, for animals simply will not drink enough ice-cold water to properly carry on the necessary functions of the body, or if they do it must be wastefully warmed by corn or other high-priced feed.

The livestock farmer must make provision for water for his stock or suffer the consequences. A failure in the water supply always brings disaster where much stock is kept. To be sure of water, deep wells must be sunk, or streams dammed, creating reservoirs, storage tanks must be provided and the time to do these things is before the pinch for water comes. A system of pipes carrying water to every lot where animals are kept is a great convenience. A pump engine or windmill and cement tanks are essential features of a water system.

A bunch of hogs showing every indication of proper care and feeding.

A 'Minus' Labor Income Leads to Study of Farm Leaks

JOHN SMITH FINDS HIS LIVESTOCK PAID POOR PRICES FOR FEED

WHEN a farmer finds that he has a "minus" labor income of $341 for the year—that is to say, an income that falls that much short of paying current interest on his investment—it's time for him to size up his business machine and look for loose screws. A minus labor income for one year, considering the hazards of farming, is not necessarily a sign of bad business. It may be merely a sign of bad luck, but the farmer who comes through a year without even paying interest on his investment should make very sure that there is no reason why it should happen again through some fault of his own.

"John Smith" is a farmer living in Defiance county, Ohio, who learned on January 6, 1922, on bringing his year's account book to be summarized at the Farm Accounting and Management School, conducted by the extension specialist and county agent of the United States Department of Agriculture and the state agricultural college, that he was almost $350 "in the hole" when his labor income for 1921 was computed. The money represented by his real estate, live stock, feed, and implements, if put at interest at 5 per cent, would have yielded him $842. His total farm income from all this investment and from his own labor was $501. Where did the trouble lie?

At the accounting school John Smith's figures were summarized and analyzed, with the help of the county agent and the extension specialist. They were also compared with his own average for the previous four years, and with the average of five good farms in his neighborhood.

Farm Inventory First Step.

At the beginning of his account keeping John Smith made an inventory of his farm—acreage, animals, supplies, tools—valueing them at $16,857. At the end of the year his closing inventory showed a value of $15,038, or a decrease of $1,819. This was largely explained by sales of livestock and reductions in the supplies of feed on hand.

His receipts from all sources were $4,420.19, of which crops furnished the largest item, $2,421.83. His expenses in raising these crops were $2,104.63, which, added to the decrease in his inventory, made a total cost of $3,923.63 for doing business. Deducting this sum from his receipts he found his real farm income to be $501.56, which was only 3 per cent interest on his investment. The use of his home and the farm products which the family consumed was all he received for his labor.

This was an abnormal situation for John Smith. During former years, when his farm income averaged $1,800 a year, he could consider his labor income as $996; but even then he did not do as well as the average of five good farms in the same region, where, out of a farm income of $3,655, a labor income of $2,354 was obtained.

In analyzing the causes of John Smith's loss, the size of his business, his labor efficiency, crop yields, and feed costs were taken into consideration and compared with his previous record and with the five-farm standard already mentioned. The Smith farm consisted of 114 acres, as against 145 average on other near-by farms. He had 66½ acres in crops and fifteen animal units; the better farms had 95 acres in crops and twenty-eight animal units.

Losses Due to Poor Livestock.

In order to have a basis for comparing the amount of livestock kept, all kinds of livestock must be reduced to some unit that can be compared. Such comparisons may be made on the basis of feed eaten. If we call a horse or a cow a unit, one can make an approximation of how many animals of other sorts will equal one unit. In this school one cow or horse was called an animal unit, and two head of young stock, seven sheep, five hogs, or 100 chickens were each called an animal unit.

John Smith had, on the whole, better crop yelds than his neighbors. He had 65 bushels of corn to the acre, as compared with 51 average on the five good farms, 62 bushels of oats to 58; 30 bushels of wheat to 25. These relatively good yields did not seem to help him. Apparently he got less work out of his horses and his hired man than his neighbors. When he asked himself whether his livestock paid for their feed he found that his returns per animal unit were $78, while his feed cost was $121.

For each dollar spent for feed, therefore, only 65 cents was returned. These figures were arrived at by subtracting the amounts of different feed sold and used for seed from the total yield, and figuring the balance at farm prices, to get the farm feed cost in addition to any feeds bought. The total returns brought in by his livestock were reached by first figuring each separately as cattle, hogs, poultry, eggs, milk, butter, etc., and adding the amounts together.

Good Livestock Paid for Crops Fed.

The average of five good farms showed returns of $118 per animal unit, with a feed cost per unit of $92, which meant $1.27 return for each dollar's worth of feed. In the four previous years, however, according to John Smith's own records, he had only averaged 92 cents for each dollar's worth of feed consumed by the livestock.

Obviously something was wrong with his livestock—a matter for serious investigation on his part and for real help on the part of the county agent. Cow testing would undoubtedly show which of his cattle were giving the poorest returns, and careful culling would eliminate the boarder hens. Purebred hogs would have to replace scrubs. With a deficit of $341 after a year's hard labor, while others had been paid well for their year's work, John Smith realized the importance of feeding his good crops to good livestock, and began immediately to make plans for improvements.

Farm Accounting Schools Will Help.

Farm accounting schools such as that in which John Smith found the leak in his business are helping other John Smiths in the same way in various other places. In a time of agricultural depression like that through which American farmers are now passing, efficiency in production becomes especially important, and it is the mission of the farm accounting school to stress this fact. All over the country extension specialists in farm management and county agents, representing state agricultural colleges and the United States Department of Agriculture, are holding meetings in which groups of farmers are shown how to keep and analyze farm accounts. These meetings, or "schools," bring to the farmer firsthand information regarding the standards of operation and how these can be applied to his own business to make its operation more efficient and profitable. Size of business standards, crop production standards, livestock production standards, and labor efficiency standards are all made available and freely discussed by the farmer and the specialist in these schools.

John Smith's upward climb will necessarily extend over a period of years, during which he will be improving the quality of his livestock from season to season and reducing his expenses by careful attention to detail or better methods. He will readjust his business from time to time in the light of the farm account of his business which he is keeping. Too often in the past farmers have had the idea that the keeping of an account of the business was a hard task. This has not been found the case by those using the book recommended by the county agent. These account books are printed in a very simple, yet complete form, and their use is being greatly extended each year. Over 90 per cent of all present at this year's schools in Ohio signed up to keep an account of their business and to attend a summarizing school next year to see how they stand in their own business. "John Smith," without doubt, will be among them.

Farming on Share Lease Plan

TENANT PUTS HIS LABOR AND MANAGERIAL ABILITY AGAINST LAND AND EQUIPMENT.

AN equitable plan whereby a family working a farm in partnership with the one in control can be paid by receiving a share of the returns is desired by one of the readers of Western Farm Life. This reader rented the farm and employed a man and family, including four persons, to help work the place. The man was to help on the farm and his wife in the home. They were to be paid by having a share of the returns after all expenses were paid. There are three in the family renting the farm and they supply teams, implements, cows and chickens. The man taken in does not help with the milking, doing only ordinary farm work. The arrangement puts his labor against half the expenses. He is to pay half for seed and other expenses. The problem is to determine what would be an equitable share for him to receive from the returns.

College Department Studies Problem.

A department of the Colorado Agricultural College is being developed under the leadership of Professor L. A. Moorhouse to work out problems of this nature and learn if possible what methods are being followed over the state where contracts involving share leasing are entered into.

Farm business analysis records have been taken by Professor Moorhouse on a number of Colorado farms, both irrigated and unirrigated. He does not find in any of these records anything which exactly coincides with the problem stated in the foregoing, but does find, however, two illustrations which in some respects are similar and which may be of some help in working out the solution to the problem of our reader and perhaps be of value to others desiring to work out share lease contracts. A study of these records may form a basis for working out an equitable method of dividing the proceeds between land-owner and tenant, the land-owner in this case being the party leasing the land. "An attempt should be made," says Professor Moorhouse, to develop a contract that will be entirely fair to all of the parties involved. If you have a good man working for you and you give him a contract that is equitable, he will have some inducement to remain permanently on the job."

Typical Plans in Operation.

The following illustrations are given by Professor Moorhouse from the records obtained in surveys made: "Farm A, in an irrigation district in northern Colorado, has developed and is using a contract in which the tenant has no equipment in the way of work stock or farm machinery. He supplies all the labor and receives in the case of grain two-fifths of the product and pays two-fifths of the threshing bill. The share in the case of alfalfa is two-fifths. He gets two-fifths of the potato crop, furnishes two-fifths of the sacks and provides the necessary labor for picking. With sugar beets the share is 45 per cent of receipts for labor, supplied by tenant, and 55 per cent to the owner of the land. The tenant in this case takes care of the contract labor. The owner of the land gets the use of the beet tops. The tenant is given an opportunity to keep three cows on the farm. The cows are fed out of the tenant's share of hay and grain. It may be noted further that this happens to be a farm on which the owner feeds sheep during the winter months. He pays the tenant 5 cents a head per month for labor connected with this operation. The foregoing statement contains the more important items in this contract.

Farm B also is an irrigated farm. The tenant has no equipment in the way of work stock or farm machinery. He performs all of the labor on the farm and receives one-third of the grain, one-third of the alfalfa, one-third of the peas, one-third of the bens, one-third of the cabbage and one-third of the potatoes. On this farm the tenant is required to pay the threshing bill. He also pays for necessary labor required in putting up alfalfa. He also meets any expense that may be involved in securing extra labor. The owner or landlord furnishes seed and necessary plants for the crops grown. The tenant provides one-third of the sacks required in handling the potato crop at harvest time. Sheep are usually fed on this farm. The landlord furnishes the necessary capital but gives the tenant a one-third interest in the sheep. The current rate of interest is charged for the capital required to handle the tenant's share. This contract can perhaps be taken as typical for farms where the tenant provides no equipment in the way of work stock or farm machinery, but he does furnish all of the labor necessary in the operation of the farm. In comparing these two farms it will be observed that the labor on farm A receives approximately one-fifteenth more than on Farm B."

Share-lease Increases in Popularity.

A United States Department of Agriculture bulletin, entitled "Rent Contracts in Typical Counties of the Wheat Belt," can be obtained free on request to the Department at Washington, D. C. "Farm Leases in Kansas" is the title of a very helpful bulletin published by the Kansas Experiment Station at Manhattan, Kan. Iowa Experiment Station at Ames has a bulletin "Stock-Share Agreement and Lease." These bulletins will be very helpful in working out equitable agreements between land-owner and tenant. In the older states where more land is being operated by tenants each year the stock share form of lease is increasing in popularity. It is far more satisfactory than the year to year rental plan in which grain rent is paid. This cannot lead to a permanent system of farming and is bad alike for land-owner and tenant.

If any of our readers are desirous of working out better plans for operating farms as between owner and tenant we will be glad to render every possible service.

Community Fairs Show Improvement.

The county and community fairs this year show decided improvements over the previous fairs in the educational and utility value of the agricultural exhibits. The livestock exhibits are also showing that more interest is being taken in improving the quality of all farm livestock. Poultrymen are paying more attention to the utility rather than fancy qualities and judging is now largely based on utility merits.

The Boys' and Girls' Club exhibits are fast becoming the most popular and attractive features of nearly every fair. Their chief value lies in the incentive that is given the youngsters to excell in their efforts. The interest that parents take in these exhibits insure permanent support for this good work. Nearly three-quarters of a million dollars in prize money is being offered this year to members of Boys' and Girls' clubs throughout the country. This is exclusive of the funds provided by the United States Government under the provisions of the Smith-Lever act of Congress.

This immense sum of prize money is distributed largely through the medium and assistance of the agricultural fairs of the country. It is contributed by fair associations, livestock and breed associations, manufacturers, bankers and bankers' associations, packers, commission firms, chambers of commerce, farm bureaus, land companies, county commissioners, school boards, seed firms, railroads, retail merchants and livestock exchanges.—F. R. Lamb, Secretary State Farm Bureau.

Good Corn Crop in Yuma County.

"We have the best corn crop this section of Colorado ever had," writes C. E. Donmeyer of Kirk. He estimates that there will be enough surplus corn in that section to feed out 100,000 sheep this season. There is plenty of straw and roughage to be obtained at reasonable prices. These conditions should make this localitly a good place for those interested in feeding sheep or cattle to investigate.

Big Poultry Crop Calls for Early Marketing

PRICES USUALLY TREND DOWNWARD FROM MIDSUMMER TO EARLY WINTER

Gilbert Gusler.

THAT a substantial increase in poultry production has occurred in the last two years has been established beyond dispute. The Department of Agriculture issues no forecast upon the chicken crop, but observations made by dealers and others over a wide range of territory have been convincingly unanimous upon this point.

The quantity of poultry reaching the leading markets registers roughly the changes in production in the country. Combined receipts of dressed poultry at the five markets, New York, Boston, Philadelphia, Chicago and San Francisco, in the first thirty-six weeks of each of the past four years have been as follows:

1922 .....128,128,180 pounds
1921 .....104,756,008 pounds
1920 .....100,857,447 pounds
1919 .....116,839,056 pounds

Compared with 1921, receipts in 1922 show an increase of 22.3 per cent, while they exceed 1920 by 27.4 per cent and 1919 by 9.7 per cent. Heretofore, 1919 was the banner year in poultry production.

The supply of eggs reaching the leading markets tell a similar story of an increase in the number of hens on duty. Combined receipts of case eggs at the same five markets in the first thirty-six weeks of 1922 and comparisons with preceding years are shown below:

1922 .....13,804,553 cases
1921 .....12,693,069 cases
1920 .....11,230,122 cases
1919 .....12,612,431 cases

Has Increased Production Gone Far Enough?

Low prices for feeds and good prices for poultry and eggs most of the time in the last two years together with unsatisfactory returns on most other farm products have stimulated the poultry man—and woman—to work overtime increasing their output. But "cashing in" time on the poultry end is now at hand. How will the market absorb the increase which is expected to manifest itself much more prominently this fall than it has yet done?

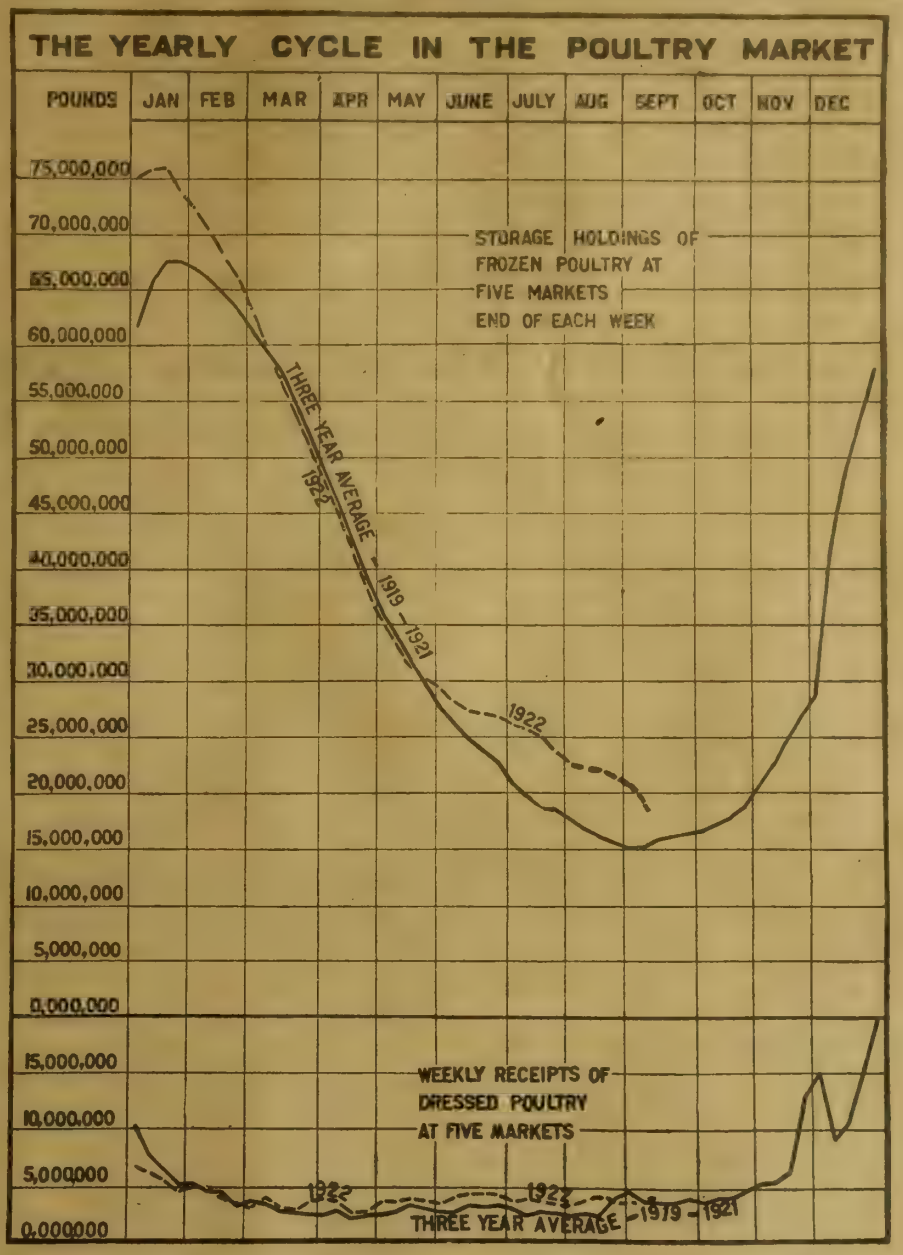
Poultry producers well may ponder how near production has come to the maximum which will permit maintenance of profitable prices. The events of the next few months will furnish a fairly good basis for the answer. Dealers have freely predicted that they will buy roasters on the Chicago market this fall at 14 cents a pound on at least some of the days of big receipts.

Dealers Advise Early Marketing.

Anticipating an enormous run of poultry this fall, the dealers are advocating the sale of well finished spring chickens early in the season—in September and October—instead of from the middle of November to the middle of January. They argue that even though greater weight is obtained by holding until later in the season, the price is apt to be lower and when feed, labor and risk of loss by disease, thieves or "varmints" are considered, the advantages are on the side of selling early. By a more uniform distribution of sales through the year it is reasonable to believe that the average price level would be higher. Especially the fact that spring roosters are counted as "stags" after December 15 and are sold at a discount should be considered.

Poultry price records are not entirely satisfactory for checking this suggestion, since the average character of the chickens being sold varies greatly at different seasons. Furthermore, the same chicken which would go as a "broiler" in June, is a "fryer" a couple of months later, and a "roaster" by October. But even with these angles considered, prices in the last five or six years have shown a fairly well defined downward trend from mid-summer to late fall or early winter. The decline has varied from 3 to as much as 15 cents a pound.

All in all it looks advisable to avoid glutting the market in the late fall and winter as far as possible. Also the practice of flooding consuming centers at Thanksgiving and Christmas time with light unfinished poultry is questionable. Usually, however, at those holidays the supply of well-finished birds is not equal to the demand.



Receipts of dressed poultry increase from September on, but are much heavier from the middle of November to the middle of January than at other seasons. They have been above the three-year average during most of 1922. Storage holdings are highest late in January, then decline to the low point about the first of September, when they begin to mount again. Stocks were above the average early in 1922, then dropped below until the end of May, since when they have not declined as rapidly as the average.

Yearly Cycle in Poultry Market.

The accompanying chart shows graphically the annual cycle in the poultry market and also brings out what has taken place in the way of increased production.

Receipts since March, 1922, held considerably above the average of the three preceding years, tumbling below the average for a short time around the end of August.

Cold storage stocks at the beginning of 1922 were considerably above the three-year average, but so great was the demand that they were cut down to less than the three-year average early in March and remained below until in the latter part of May. Since May the increase in consumption has not kept pace with the increase in production. This prevented storage holdings from declining as rapidly as they usually do.

Receipts of poultry in the past have fluctuated sharply with the season. A sharp decline is shown during January and a gradual one in February and March, while the supply is fairly uniform during the summer. It increases gradually after August and sharply after the middle of November. Heavy shipments to catch the Thanksgiving and Christmas trade have been the rule, receipts in those weeks being from three to eight times as large as in the low summer period.

During the late fall and winter much more poultry is marketed than the public is ready to consume immediately and large amounts are accumulated in a frozen state in cold storage. Such accumulations usually begin in September and are most rapid in November, December and January, but by the end of January the tide turns the other way, consumptive demand then requiring all of the fresh receipts and some of the storage product in addition. Cold storage operators always expect to buy cheap enough in the storing season to be able to sell out later on at a profit. They have lost money in the last two or three years and are apt to be quite cautious this year.

Market Outlook for Farm and Ranch Products

CATTLE MARKET IN HEALTHY CONDITION; DRESSED BEEF DEMAND INCREASES

Edited by Glenn G. Hays.

ASIDE from an over-abundance of common cattle which invariably occurs at this season of the year, the cattle market is a healthy affair. Cooler weather and the recent settlement of the coal and rail strikes have brought an expansion of the dressed beef trade and the largest run of the season at the leading markets last week was absorbed at higher prices for practically all kinds. Prime matured steers reached a new top of $11.65 at Chicago, and scarcity of such steers is expected to continue until December. Intermediate grades of steers failed to advance as much as the best kinds as the western range delegation increased materially, but rangers sold up to $9.50 at Chicago. Cows and heifers also have made moderate gains recently. Bulls recovered smartly from the recent depression and veal calf prices were the highest of the season.

A further increase in market supply can be expected before the high point of the autumn beef harvest is reached, but no pronounced decline in the price level is likely unless brought about through the abundance of pork and poultry during the fall months. The broad movement of feeders to the country in the last few weeks forecasts a generous supply of shortfeds within the next three months so that a pronounced advance upon the rank and file likewise appears improbable.

Combined shipments of stockers and feeders from the leading markets continue to run far above the corresponding period in either of the two preceding years and are increasing rather consistently each week. Widespread rains and revival of fall pastures was an additional stimulus recently. Prices show but little change, since the supply from the western range, the southwestern pastural area and Canada is adequate for the demand. Lightweights at prevailing prices seem to offer the safest opportunity for the feeder.

Sharp Advance in Hog Values.

Receipts of hogs at the leading markets again set a new record for the corresponding week, but prices advanced to the highest point in a month, the $10 line being crossed at Chicago. Packing sows are becoming less numerous right along while new crop hogs are showing up, this change in the character of the supply being a factor in the higher average price level. Average weights are declining but are above the average for the corresponding period. Lower prices for pork appear to have stimulated demand and the settlement of labor troubles together with cooler weather were additional aids, so that trade, both in fresh pork and cured hams, was unusually brisk. Export trade also has improved. Stocks of lard in storage are decreasing steadily and hog meats are disappearing more rapidly than during August.

From this time on receipts can be expected to increase rather steadily from week to week so that the recent advance may not be maintained. The Department of Agriculture reports the number of stock hogs on farms for fattening at 60,500,000 head, or 8.4 per cent more than last year.

Marked Improvement in Horse Trade.

Demand for horses has broadened materially in the last few weeks and prices upon the better grades are higher. City buyers are after drafters weighing 1,700 pounds and up at prices ranging from $200 to $300 at Chicago, an advance of about $10 over recent levels. Most of the arrivals consist of 1,400 to 1,600 pound chunks which bring $130 to $175. Southern trade has improved in both horses and mules. Coal dealers are in the market in a limited way and logging outfits are showing interest.

Lamb Receipts Lightest on Record.

Receipts of lambs and sheep at the seven leading markets in the last few weeks have been the lightest on record for the corresponding season. The total last week ran more than 40 per cent below the average. Consumptive demand is fairly broad (Turn to

The First American

By ALBERT PAYSON TERHUNE

A NOVEL

In Eleven Chapters.

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CANTERING around the curves of the Auteuil byroad in France, Hugh Mallock, self-styled "an American," born in the Virginias, where his father, Sir Hugh Mallock, and his young French wife had fled to escape the injustice of Queen Elizabeth, came upon a gray little wisp of a man battling with four footpads. After his assailants had been put to flight the little man who shows no evidence of gratitude toward his rescuer whom he sharply questions as to his nationality, mounts his horse which was brought to the scene by a servant and proceeds on his journey to Malmaison. A jeweled snuff-box fell from his pocket as he galloped off, which Mallock picks up and finds has inside its lid the miniature portrait of a beautiful girl such as he had never before seen. While examining it a gentleman of France dressed in gaudy court fashion rides up and catching sight of the jeweled box, demands it as his property after telling Mallock that the girl was Mlle. Claire de Sieux, daughter of Chevalier de Sieux. Attempting by force to compel Mallock to give him the box, he is defeated, disarmed, and unhorsed in a sword duel, and after being balked in an attempt to cowardly slay his opponent with a pistol, he sullenly leaves, muttering dire threats. Determined to return the box to the fair girl whose portrait it contained, Hugh Mallock rides to the house of the Chevallier and meets the owner, who calls his daughter and tells her Mallock is the bridegroom he promised her. The girl, who has been educated in the French fashion to expect a husband to be selected for her, rebels at the thought and appeals to Mallock to save her from marrying a man against her will, pointing out that the only way is to signify to her father that she is not to his liking. Mallock, although completely enamored with the girl, indignantly denies that he has made any bargain with her father, and in a spirit of gallantry unknown to the men of France, promises he will tell her father what she asks, even though it be a lie. Just as he is telling her he had nowhere in all his wanderings ever seen a woman her equal, the door opens and her father appears.

I Fall In and Out of Trouble.

The Chevalier de Sieux bustled into the room, his haughty, arrogant face contorted into what was doubtless meant for a roguish smile. Ie reminded me of a Notre Dame gargoyle.

"Well!" he rumbled jocosely, "is the billing and cooing over? Monsieur, though I say it that shouldn't, there is no prettier bride in all King Louis' domains than yours. How has the wooing progressed?"

"Very badly, sir," I replied.

"Ah? How's that?" he rapped out, his grin changing in a trice to a glower, as he bent his bushy brows at the trembling girl. "You've rebuffed him, have you, mademoiselle? After my warning, too! I see more drastic measures are necessary to——"

"You are quite wrong, chevalier," I intervened, speaking coolly, although I burned to thrash him, "Mlle. Claire is not at fault. She han been most civil to me and has in no way run counter to her father's wishes. The blame is not with her, but with me!"

"What? Speak plainly, man."

"To speak plainly—even brutally—I cannot accept your generous offer. While love and marriage need not perhaps go hand in hand, I would not marry the Queen of France herself, if I found her personally distasteful to me. One's tastes are not to be governed by one's wishes. And I confess with sorrow that I cannot achieve an ordinary liking for Mlle. Claire de Sieux."

(This last sentence, by the way, was gospel truth. "Liking" and "adoration" have naught in common. As I had just learned.)

The old chevalier gaped at me, purple and speechless for well-night a minute; his big face distorted and twitching. Then, catching breath, he howled:

"Zounds, man! Do I hear you aright? You refuse to marry the prettiest girl in Paris? Of a family that dates back to Charlemagne? And a dowry of 2,000,000 francs?"

"I humbly, regretfully, yet firmly refuse the girl, the family, and the dowry," I made retort, not daring to glance toward Claire, lest I shout aloud that I asked no better reward in earth or heaven than to love her. "In plain words, the match is off. I beg your leave to retire."

"Retire?" he squealed, fairly foaming at the mouth. "Retire? Yes, with ten sword wounds through your body! D'ye think you can put this gross affront on a De Sieux and live to boast of it?"

He spoke thickly, incoherently, drunk with blind rage. Reeling toward me he flashed out his rapier and lunged murderously at my heart.

I stepped aside, struck his wrist sharply sideways with my open palm, and sent the sword clattering to the stone floor. Breaking the blade under my heel, I moved toward the door. But I was not to escape so easily.

The chevalier seized the bell-cord and pulled it till the rope fell from its hook. Through the echoing house sounded the great gong. Running footsteps sounded from every direction.

In a moment the double doorway was filled with excited, questioning lackeys. The chevalier pointed a shaking finger at me; sputtering apoplectically.

"Down with him!" he gurgled half audibly. "Do not let him leave this room alive! I will be your warrant with his majesty and the cardinal!"

Even as he spoke, Claire sprang forward, her lips parted in quick expostulation. I saw that to save me she was about to tell the truth. To forestall her, I did a most undignified thing.

With a shout that quite drowned her words, I snatched up a heavy chair, whirled it above my head and rushed forward toward the group of lackeys who, in the doorway, were beginning to bristle with drawn daggers and other weapons.

Had I made for them, sword in hand, they would doubtless have come forward to repel my attack. But, seeing the huge chair swung above them, knowing not whether I meant to strike with it or to hurl it, they halted an instant in perplexity.

That moment was quite enough for my needs. I had already edged toward the nearest long open window. Now, letting the chair fall with a prodigious clatter, I leaped backward over the window-sill and on to the balcony outside.

There I collided with a man in servant's livery, who seemed glad enough to let me get past him. One hand on the balcony rail, I vaulted over onto the soft turf of the garden.

Picking myself up I dashed for the street and round the nearest corner. As I went I heard shouts, a clashing of arms and stamping of feet in the garden. Evidently they were searching for me in the shrubbery.

From the time I dropped the chair until I rounded the corner, a bare ten seconds had elapsed. Forest life and long association with wily Indians had taught me agility and the art of getting out of a trap, even if I had learned naught else therefrom.

I slackened my pace as I turned into another thoroughfare. Several passers-by were hastening homeward through the twilight. For Paris' dark, narrow, twisting streets were not the safest places on earth, after dark.

I struck the same pace as these pedestrians; hoping, should pursuit reach that highway, to be mistaken for some homebound Parisian merchant.

My brain was in a turmoil. Not at the escape I had just achieved, but with wild memories of the girl I had met and renounced. I should never see her again, of course. Yet I knew full well I could never forget her, and that life could no longer be for me the care-free amusing game of old.

"I suppose this is what the poets call love," I mused. "I have read of its wondrous joy. But to me it seems more like the end of the world."

Fierce angry self-contempt gripped me. What an overscrupulous fool I was! Her father, for some quite insanely mysterious reason, had chosen me, a total stranger, for Claire's bridegroom. In France it was apparently the custom for young girls to obey their parents blindly in such matters. Why had I not insisted on the marriage?

I could in time have taught her to love me. Of that I was sure. For, love like mine must find some response to its all-consuming intensity. And, at worst, she would be no worse off than if she had been forced to marry, as one day she must be, some other man of her eccentric father's choice. Yes, I had been an idiot! A prudish, too-considerate idiot!

But always as I came to this conclusion I would take out and glance at the snuff-box picture. And that would reassure me. Better, ten thousand times, that I go forth into a life of lonely heart-emptiness than that those amber eyes be again filled with horror and panic dread on my account!

The snuff-box! It had apparently not belonged to the Chevalier de Sieux at all. In any case, the excitement of my visit had wholly driven from my mind my wise intention of handing it over to the chevalier with an account of how it came into my possession, and of asking him to restore it to the little gray man.

What was I to do with it now? Here I was a stranger in Paris, carrying about with me a thirty thousand franc snuff-box for which my honest efforts could suffice to find no owner. It fairly burned in my pocket.

Paris was surely a strange place, where such a loss could pass unnoted. Why, in New Amsterdam or Jamestown, the loss of a rifle or of a keg of rum would have turned the whole settlement inside out! But what was to be expected in a city where men of rank offered their daughters and two million francs dowry to the first chance visitor who entered their homes?

I was plodding along thus, deep in my own musings (yet instinctively looking keenly about me as my wilderness training had taught me to do in strange places) when, out of the blur of hastening home-goers, one man's face suddenly stood out in sharp relief.

It was a face I knew. Yes, and I knew the lean, small figure in its shabby surtout. It was the little man in gray!

He was hurrying along in furtive fashion, close to the house walls. So swiftly was he going that he had met and passed me before I could accost him.

Here, at last, was my chance to return the snuff-box to its rightful owner!

Taking the jeweled bauble from my pocket I ran after the gray man. He did not see me. I had almost caught up with him, when he paused, opened a little door in a wall, slipped inside and closed the door after him.

The action was as quick and as stealthy as the dive of a rat into its hole. My hand had been outstretched, to offer him the snuff-box—a word of salutation had been on my lips—when he disappeared, leaving me standing outside the door.

I looked up. A high gray wall, evidently the rear of some great house, rose above me. It was pierced here and there with small windows, the lower ones barred. Before me was the closed postern-door across whose threshold the little gray may had jused passed.

Perhaps, by this time, you may have noted that there is a grain of stubbornness in my nature. I not only resented my failure to catch up with the gray man, but I was determined not to be balked by my resolve to give him back his snuff-box.

I had set out to do so and I intended to go through with the business. Obstacles have ever made me the more determined. It suppose it is my English blood.

Moreover, in this city of footpads and pickpockets, I might readily lose the box. Thus, I would be depriving a poor man of what was probably an heirloom, his one treasure.

The little gray man was doubtless a dependent of this great house at whose postern-door I stood. He might be a secretary or other bookish person, to judge from his playwriting tendencies.

This snuff-box, if it were not his own, had perhaps been intrusted to him by his master to send to the goldsmith's for repair. Its loss might well deprive him of his position.

I knocked at the door. No reply. I knocked again, louder. Then I tried the latch. To my surprise the little gray man had neglected to fasten the door from within. It opened to my touch.

I entered, closing the door behind me. I was at one end of a long, dark corridor, at whose farther extremity shone a light. By the dim glow I could see a few doors of darkened rooms opening out on either side of the passageway.

The light beyond seemed to come from a larger room. I could also catch the murmur of voices from this apartmen, but not loud enough to catch the meaning.

In one side room, behind bars, lolled four huge bloodhounds. I wondered at their presence there.

Down the stone corridor I hurried, the snuff-box still in my hand. Should I find the little gray man in the large lighted room at the end, I would turn it over to him, then leave the house at once.

For, to my outdoor nature, there was overmuch of the prison about this dark, vaulted place. And I was anxious to be quit of it.

I reached the end of the passage and stood blinking on the threshold of a great guardroom. Torches in wall-sockets made the apartment dazzlingly bright. A half score men-at-arms lounged about on benches, chatting, dozing, or polishing sword, spur and steel cap.

At a table in the center sat a man clad as an upper officer. He was glancing over some papers; evidently routine reports. But no sight could I gain of my little gray man.

I walked up to the table, doffed my hat to the officer and began to tell my story. Holding out the snuff-box, I said:

"Pardon, monsieur le captaine, but I found——"

I got no further. With one glance at the hieroglyphed box-cover, the captain was on his feet.

"Seize him!" he shouted, snatching up his sword from the table in front of him.

Sore puzzled, yet knowing there was no time to argue, I trust the snuff-box into the front of my doublet and drew my sword; springing back toward the wall as I did so.

Then they were upon me.

It is only in the fine old romance-tales that one man, be he ever so strong and deft, may make headway against ten armed soldiers. I slashed, thrust and parried, as best I might. But there was no scope for sword play. My blade opened a cut on one fellow's cheek, pricked the shoulder of a second.

A soldier, ducking under my guard, ran in and seized me about the body. With my mighty strength I cast him off as a mastiff might dislodge on enraged cat from his back.

But the momentary interval sufficed for three others to push past my disengaged guard, batter my sword aside and fling themselves bodily upon me.

Two more caught me from behind, pinioning my arms. Up and down the guardroom I dragged them; struggling, tearing, smiting. But in the end I was tripped up.

To the floor I went, under an avalanche of squirming bodies. The impact of the stone flags knocked the breath out of my body, and half stunned me.

Ere my tumbled wits could clear, they had wound a rope about me, trussing me up like a roasting hen; knotting the cords tight about wrists and ankles.

Even in the stress of the moment, I dully noted how awkwardly they bound me. Securing a foe with rope and thong is a genuine art, as every Indian knows. And these men-at-arms did it with lamentable dearth of skill.

Resistance was useless. So I feigned unconsciousness and lay limp and heavy in the soldiers' grasp, saving my strength and avoiding rougher handling.

With a hurried order to his men, the captain ran from the room. I heard his spurred boots clicking up the stairway. I was rolled onto a bench.

"What next?" queried a man-at-arms.

"To wait the captain's return, I suppose," grunted another.

"Who is the fellow? And what has he done?" queried a third.

"What matter? We will know soon enough," said the second phisolophically. "It must be some one of note, in spite of his plain dress. Otherwise the captain would not have been so eager about it. I never saw him excited be-

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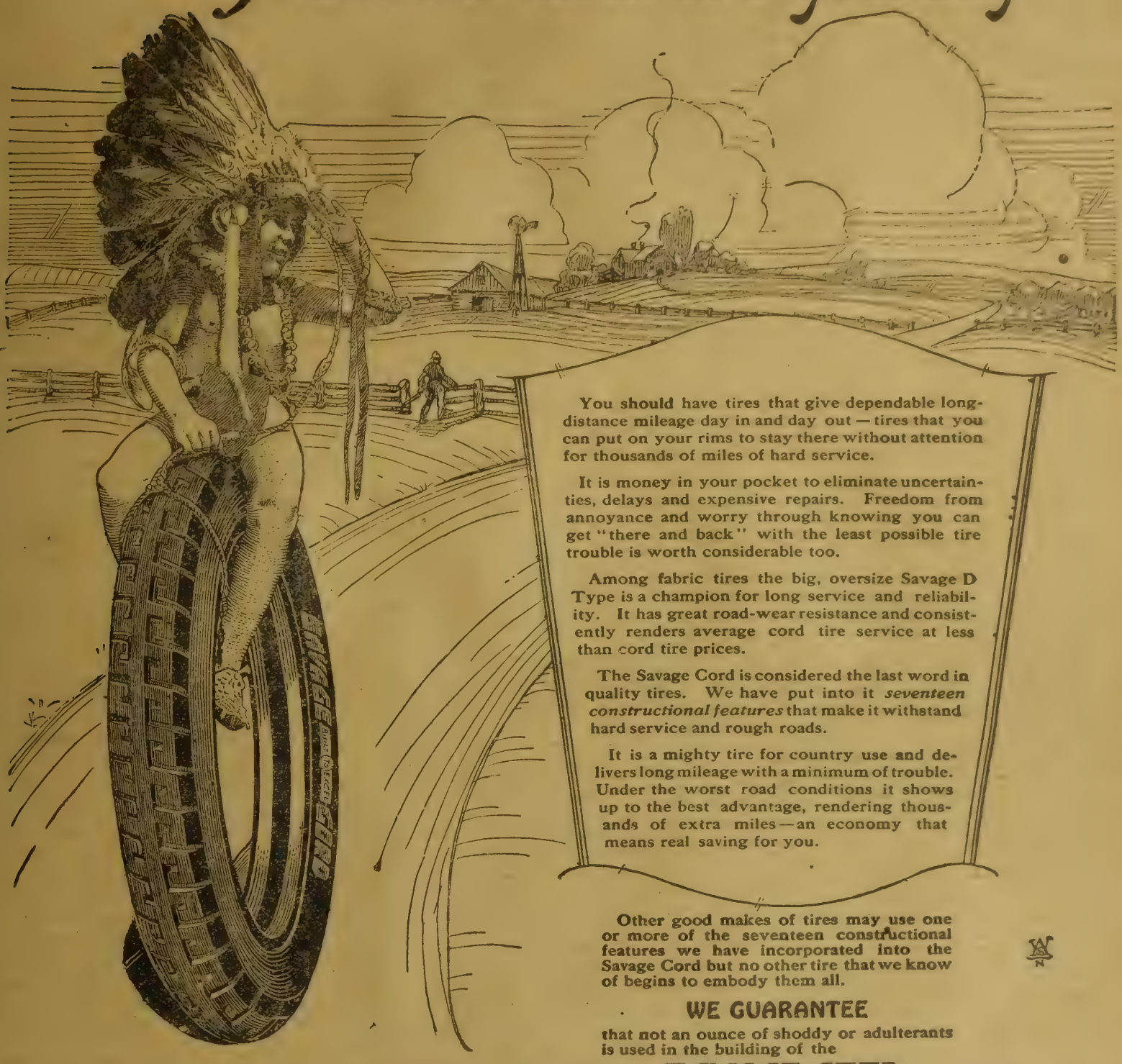

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fore. This must be a big fish we've netted."

Loud voices and quick steps on the floor above testified to a turmoil of some sort. Evidently the news of my capture had aroused no little interest.

But why? I was an insignificant, unknown foreigner. Why should I be so important in a lordly household of this kind? Certainly—to judge from the reception I had already met there—the interest in my capture boded me little good.

Soldiers are but human. At sound of the noise from above and the confused medley of voices, they one and all gathered at the stair foot, just outside the guardroom door; straining every faculty to catch the import of the bustle.

On the instant, I took my one chance.

As a lad I had played—and played well—the old Indian game of "Bind Me." One boy would tie another with the most intricate knots he could devise, and the bound victim was allowed a certain length of time in which to twist or wriggle free. If he failed to do so, he must pay a forfeit. Should he free himself in less than another (still briefer) period, the first boy paid the forfeit. I had seldom been forced to pay.

The chance was desperate. Perhaps wholly useless. But it was my one hope.

CHAPTER V.

Fate and a Cloak.

An Indian would have sneered in lofty scorn at the awkwardness of my bonds. To me, they offered absolutely no difficulties. A forester who could unfasten a set of wrist-and-ankle knots tied by the Pamunkey's wisest medicine man, as could I, had little to fear from such trifling drawbacks.

But there was real difficulty in disposing of them silently and with imperceptible motions, in the tiny space of time I had at my disposal. At any instant one of the soldiers might glance back into the room at the bound and seemingly unconscious captive.

With a turn or two, and a deft application of an old Delaware trick, I had freed one hand. Then both. Then, drawing up my feet, I loosened the ankle thongs.

It was all the work of a few seconds, and I had begun it just as the soldiers started for the stairway. A silent wriggle or two and I rose; my ropes dropping away. Never had I had so easy an unbinding task.

My soft boots made no sound on the stone floor. At least, none to be heard through the increasing clamor above stairs. The table was between me and the door. On it lay my sword, where the officer had tossed it when it was wrested from me. Over a chair beside it hung his uniform cloak, with the "arms" of a noble house emblazoned on one shoulder.

My own cloak had been ripped to ribbons during the tussle, and my doublet was badly torn. I could not appear thus in the streets. The first company of the city watch which I should meet would have me by the heels as a vagrant.

I caught up the cloak in one hand, tucked the sword under my arm, snatched my dusty, battered hat from the floor, and ran on tiptoe down the corridor toward the postern-door whereby I had entered.

Do not imagine, I beg, that I had taken one-third as long to do these things as I have wasted in describing them. I had moved, I flatter myself, with the noiseless speed and accuracy of a trail-Indian. I can think of no other simile so good.

It was the work of a bare two seconds to rise from the bench, seize hat, sword, and cloak, and reach the corridor.

Past the hideous bloodhounds I raced. The fierce brutes broke into deep growls at sound of my running feet. I made at breakneck speed for the door, reached it, and slipped into the street just as the racket of many steps down the stairway sent my guards scampering back to their posts to find me gone.

I slung the uniform cloak about my shoulders and ran my sword back into its scabbard. Then, with hat pulled low over my forehead, I st

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Select Potato Seed in the Field.

Tremendous losses in the potato industry, both in quality and in yield, result from use of poor seed. Quality will be an even more important factor in the future than it is now. The potato grower who falls down in the quality of his product will have to be content with low prices and poor demand for his crop. Disease is becoming an increasingly serious menace to the potato grawing industry. The potato grower without his own seed plot and who uses culls for his seed is inviting disaster and loss. The mosaic disease, for example, is deserving of special attention. It is becoming widespread and is particularly serious with some varieties. Its cause is as yet unknown and no complete method of control has been found. No surer means could be found to increase this disease than that of using potatoes too small for market for seed. These small potatoes come from the diseased hills and will reproduce it in the succeeding crop.

Every real potato grower will have his own seed plot. It only requires from one-tenth to one-fifteenth of the entire acreage planted for growing the seed required. Such a plot should of course be started from carefully selected seed and all through the growing season must be watched in order that varietal mixtures and weak and diseased plants may be destroyed. The grower without a seed plot can make some progress by selecting his seed from the field at digging time. The late crop is now being harvested and the grower who would improve his chances of producing a good yield of high quality next year cannot do a better job than to spend some time in the field selecting the hills to save for seed.

Growers frequently complain that a given variety runs out after being grown for a series of years. Men who have studied the problem can find no evidence that this occurs if some effort is made to keep up the stock by careful seed selection. The cattle men would know what to expect if he sold all his best animals and used culls and scrubs only for breeding. It is no less true of the grower of potatoes or other farm crops. There is no excuse whatever for the potato grower to be less wise than the cattle or hog grower in following the breeding practices necessary to maintain the standard of his product. Why not make a start by carefully selecting the choicest hills from the field at digging time, now, this fall, and then next year go a step farther and establish a real breeding plot.

President Signs Grain Futures Act.

The bill to regulate trading in grain futures which was re-enacted on a basis which Congress believes will stand any legal test applied by the Supreme Court, has been signed by the President. This bill provides for the supervision by the Secretary of Agriculture of the trading in grain futures on the Chicago Board of Trade and other grain exchanges in the United States. In commenting on the new law Secretary Wallace said:

"The new law takes the place of the regulatory provisions of the Future Trading Act of August 24, 1921, which were declared unconstitutional by the Supreme Court of the United States last May. In substance the new law is the same as the old, but the new law is based on the power of Congress to regulate interstate commerce, while the former statute was based on the taxing power of Congress. The new law does not become operative until November 1. As all of the exchanges were fully acquainted with the requirements of the former law, there should be no difficulty or delay in complying with the new law. The exchanges affected are those at Chicago, Minneapolis, Duluth, Kansas City, St. Louis, Toledo, Milwaukee, San Francisco, Los Angeles and Baltimore.

"This law does not interfere with hedging transactions on the boards of trade. Neither does it interfere with ordinary speculation in the buying or selling of contracts for future delivery. If, however, there should be evidence of undue manipulations, or attempt to corner the market, or of the dissemination of false or misleading information about crop or market conditions by members of the exchanges, such conduct would be inquired into and promptly dealt with as required by the law. In addition, it prohibits the exchanges from discriminating against co-operative associations of grain producers who may desire membership in order to obtain the use of the facilities of the grain exchanges. The Secretary of Agriculture also is given the requisite authority to examine the books and records of the members of the exchanges and to require such reports as may be necessary to carry out its provisions.

"The reports that this law will put the grain exchanges out of business or interfere with their legitimate functions are without foundation. It will not interfere with the proper operation of such exchanges. No one will be persecuted. No proper business will be harassed. The law gives us an opportunity to observe and inquire into the operations on grain exchanges and to put a stop to improper practices, if such exist. It gives opportunity to study this whole system of registering prices of grains. In a year or so we should be able to speak with authority concerning grain exchange dealings. Nobody can do that now.

"In the administration of this law I am confidently expecting hearty co-operation from legitimate dealers in grain and from all others who favor free, open and competitive markets."

Stockmen Help Gather Statistics.

It is up to stockmen of the mountain states to co-operate with the Bureau of Economics of the United States Department of Agriculture in obtaining reliable enumeration of the various classes of stock in the survey now being made. At the recent Denver meeting of the National Livestock Association some of the members seemed of the opinion that it was impossible to obtain the information, but this finally simmered down to criticism of some of the impractical features of the inquiry schedules formerly sent out. It was generally agreed that stockmen themselves could give the most accurate figures obtainable if they but set themselves to the task. Conferences between the Bureau officials and representative stockmen have already eliminated much of the misunderstanding and impractical features of questionnaires to be used.

The schedules of inquiry are being sent out by the estimates bureau now in operation at the state capitol in Denver, under the direction of W. W. Putman, local estimator, and Frank Andrews, supervisor in charge of the range states district for the Bureau of Economics. Secretaries of all local cattle and sheep associations are being urged by President Ben M. White of the Colorado Stockgrowers' Association to give their strong support to this movement to obtain a reliable enumeration. In his letter sent to the various secretaries Mr. White says:

"In order that an estimate of the probable increase or decrease in number of cattle to be ready for market this fall compared with the number actually sold last fall, may be made, it is necessary to call upon each stockman personally, in order to get only a percentage figure that will indicate about what the increase or decrease is expected in the coming season's marketable cattle for the state of Colorado, and this is of vital importance to you, and we trust that you will make every effort to lend your personal assistance in filling out these forms when received."

We feel that it is to the interests of stockmen to co-operate to the fullest extent possible in the effort being made by the Bureau of Economics to obtain reliable livestock statistics and would urge that Western Farm Life readers give prompt attention to the requests for information which may come to them.

New Departure at Dairy Show.

Classes for grade cows have been provided at the National Dairy Exposition to be held this year October 7 to October 14, at Minneapolis, Minn. The grade cow in point of merit as a producer owes her good qualities to the pure blood in her veins and this recognition of the grade in a show of this kind is justifiable, in fact highly commendable. Classes will be provided for grades of the Ayrshire, Brown Swiss, Jersey, Guernsey, and Holstein breeds. This new feature is being appreciated and will without doubt be one of the interesting and instructive sections of this great dairy show. General Manager W. E. Skinner reports that 250 to 300 head will be exhibited in these grade classes.

The point of interest to Colorado farmers is that Wisconsin has agreed to be there with fifty head, and each one will have a butterfat record of three hundred and sixty pounds or better. After the judging these grades will be sold at public auction. Here is a good chance for farmers to get high grades at their own figure. If one does not care to bid he can receive a great amount of information by at least going back and seeing a good bunch of working grades.

Hard Facts About Concrete.

It has been too generally considered that any one who could put varying quantities of cement, sand, gravel and water together was a concrete worker. Even expert concrete men probably have not realized the importance of having just the right amount of water in a concrete mixture. Many farmers do their own concrete work and are interested in having it stand and develop the desired strength. In a recent issue of the Concrete Builder, published by the Portland Cement Association, the following statement heads a short article: "Do you know that no other single factor has so great an effect upon the strength of concrete as has the amount of water used?" It is pointed out that thousands of tests have been made to determine the exact relationship between the amount of water used and the strength of the resulting concrete. It was found that varying the quantity of water 10 per cent above or below the correct amount reduced the strength of the concrete by 30 per cent or more. The use of very wet sloppy mixtures in some instances reduced the strength 50 to 60 per cent. Without having a definite test on any particular mixture, about the only general rule to follow is to use the least amount of water that will give a workable mixture. We refer to this fact in concrete work because so many failures result from concrete work done on farms. A farmer must of necessity learn many things about many different operations and the technical requirements of good concrete work is one thing about which he cannot know too much.

Community Fair Exhibits.

A particularly valuable and educational feature of the recent Morgan County fair was the rivalry of the various communities of the county in the local exhibits. Previous to the fair the county had been divided into ten districts, each under the supervision of a chairman whose duty it was to arrange a miniature fair in the community in advance of the county fair. Prizes were awarded winners in the district contests and the prize displays were then brought to Fort Morgan, where they competed with each other. This method brought together an unusually representative display of the agricultural products of the whole county. These district displays occupied the greater part of the space in the agricultural building and no department of this fair brought forth more favorable comment than the showing made in the farm crops section.

Writing for the Paper.

Nothing has a greater value in an agricultural publication than a first-hand story from a farmer or livestock producer who has made a special success in some particular line. Too often, however, when we appeal to some one to write and tell of a success of this kind we get the answer that he does not know how to fix it up for the paper. Now, we have no rules whatever to which our readers must conform in writing of their experiences which might have a value to others, other than they must sign their names. If you have a real message on any farm topic, it matters not in what form it reaches us. It is part of our job as editor to put in shape for our readers the many ideas that come to us in various ways. Do not hesitate to write for fear you will break some rule of punctuation, spelling or grammar. Write out the facts in your own way and we will see that they conform to the style adopted for our publication when they appear in the paper.

From the Nation's Capital

HOUSE AND SENATE REACH AGREEMENT ON TARIFF BILL.

E. E. Reynolds.

CONGRESS will soon be adjourned, according to present indications, the schedule being first the passage of the tariff bill, and then of the bonus bill. After that there will be a few routine matters, and then a sine die adjournment, to last until the December session, unless President Harding listens to the urgent advocates of the ship subsidy bill, and calls another special session right after election.

The tariff bill has been fixed up so the conferees from the House and Senate came to an agreement, and it was reported on Tuesday, September 12. The bill as reported looks much more like the Senate bill than it does like the bill which was passed by the House and sent to the Senate nearly a year ago. The American valuation plans went out in conference, and the agricultural rates which had been written into the bill much higher than the House rates on schedule 7 remain almost as written by the Senate. The Senate lowered many other rates, necessary because of its insistance on the foreign valuation.

Some of the tariff rates agreed to by the conferees, and most likely to remain in the bill when it finally passes some time this week or next are of special interest in the range country. Among them are:

Wool, 31 cents per pound, scoured basis. Sugar, $1.76 a hundred against Cuba. Hides on the free list, along with most all leather goods. Cattle—Less than 1,050 pounds weight, 1½ cents per pound; heavier, 2 cents pound. Fresh beef and veal, 3 cents pound. Sheep and goats, $2 a head; mutton and goat meat, 2½ cents pound; fresh lamb, 4 cents pound. Swine 1½ cent pound; pork, ¾ cent pound; bacon and ham, 2 cents pound. Lard, 1 cent pound; lard substitutes, 4 cents pound. Butter, 8 cents pound. Eggs, 8 cents dozen. Horses and mules, 20 per cent ad valorem, not less than $30 a head. Wheat, 30 cents bushel. Oats, 20 cents bushel. Corn, 15 cents hundred. Potatoes, 50 cents a hundred. Hay, $4 ton. Straw, $1 ton. Beans, 1¾ cents pound.

—x—

Congress Recognized Agriculture in Oil Schedule.—For the first time Congress took cognizance of the great danger to American agriculture from the hundreds of millions of pounds of tropic and oriental oils coming into the country since the war, in competition with American lard, cottonseed and peanut oil and butter, and put a duty on all these oils, ranging from 2 cents on coconut oil to 4 cents on peanut oil.

Agricultural leaders here feel as Grey Silver of the Farm Bureau Federation put it, that "we have been very happily treated"; but this did not go for the duty left on potash in the bill, almost all agricultural organizations having been in favor of free potash. The conferees left a duty of 1½ cents a pound pure potash content on fertilizers in the bill, and this is likely to precipitate a fight to put potash on the free list, as it was in the Senate bill.

—x—

Compromise on Sugar Tariff Rates.—The Louisiana cane growers and the beet sugar growers worked very closely together for the duty on sugar, and were hopeful in the compromise between the House and Senate at between $1.80 and $1.84. They, however, were unable to quite reach this figure. The rate of $1.76, while not satisfactory, is far better than recent tariff rates, and is believed to allow margin sufficient for a continuance of the two great sugar industries.

—x—

Hard Fight on Wool Schedule.—The wool tariff fight has been splendidly organized and handled, with Senator Gooding as the foremost figure, ably aided by the Senators from all the wool growing states east and west. The schedule as written in the Senate, based on 33 cents a pound scoured basis, was bitterly attacked in the House conferees led by Representative Longworth of Ohio, and it took a hard fight to retain what was retained of this rate. Representatives of the Farm Bureau wool organizations, and of the national wool growers' organizations, were here during the last few days of the conference and did good work.

—x—

McNary Amendment to Bonus Bill Rejected.—Two days after finishing up the tariff conference the same conferees finished work on the bonus bill, announcing the rejection of the McNary amendment for the reclamation of vast areas of western land, and the Simmons amendment for the payment of the bonus from proceeds of foreign war loan repayments. The opposition to the McNary amendment has been very strong. It was said that it would be the principal reason for a veto by the president if it remained on the bill. The decision of conferees to reject it is said to be due to this, rather than to objection to the McNary reclamation project as a whole.

Senator McNary is greatly disappointed at this action, but is said to have received many pledges of support for his plan, when it comes up as a separate bill in the next session of Congress.

The McNary resolution authorizing a searching investigation into the work of crop insurance has been recently passed by the Senate. He proposes to have the government stand behind the best proposal to inaugurate nation-wide crop insurance that the investigation discloses.

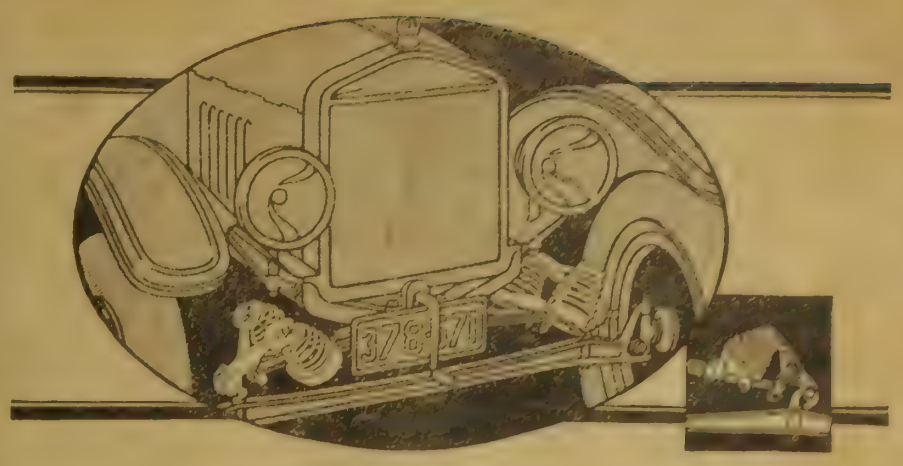
—x—

Farm Bloc Studying Rural Credits Bill.—The farm bloc is hard at work on rural credit plans. Recently Bernard M. Baruch was invited to address the bloc on the various bills now pending, and to give his views. He said any of the four bills would grant a measure of benefit, but he suggested that the bill should provide for three types of credit, and three separate and distinct debentures to finance each credit type by itself. One was credit for orderly marketing, another credit for livestock production, and third credit for ordinary crop production. He opposes amendments to the Federal Reserve law permitting twelve months' agricultural credit, stating that all farm credit should be furnished through the sale of debentures.

Chicago Producers to Market Milk.

Milk producers in the Chicago dairy district are determined to market their milk co-operatively through the reorganized Chicago Milk Producers' Co-Operative Marketing Company. The new contract had 6,347 signers on September 1. The contract was devised by the Committee of Nine, appointed by E. B. Heaton, director of dairy marketing for the American Farm Bureau Federation. According to the preliminary reports in the hands of the committee on September 1, the minimum of 6,000 signers which it was necessary to secure on that date in order to make the contract binding was exceeded by at least 347, with many locals yet to report.

The success of the Chicago campaign is of interest to producers and consumers not only in the Chicago district, but everywhere. The new contract contains unique features which lead many students of dairy marketing to believe that it will find application in a national way. E. B. Heaton, the Farm Bureau dairy marketing director, who has been largely responsible for the success of the plan, declares that the establishment of four pools within the main pool and the deduction of a small sum from the price in the inner district to be added to the lower price in the outer district in order to protect the fluid milk market from oversupply, is essential to co-operative dairy marketing success in any section similar to the Chicago territory.



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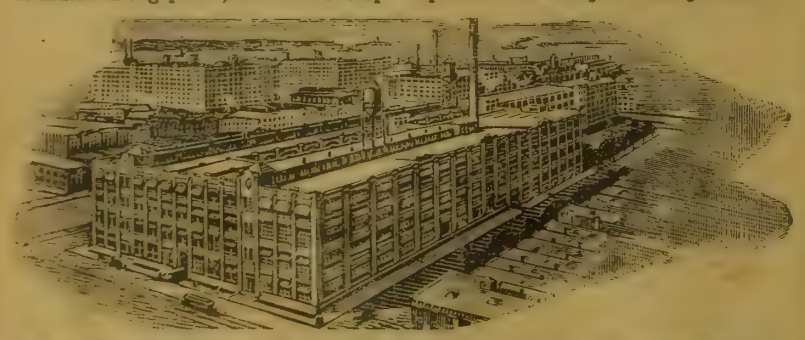

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Treating Grain for Weevil.

What treatment can be given a bin of wheat to kill the weevils? How can we prevent them from getting in other bins? I find weevils in some spring wheat carried over from last year and do not wish to sell just now. Have been advised to use carbon bisulfid, but do not know how much or how to apply it and not harm the wheat.—R. C. C., Phillips county, Colo.

Fumigation with carbon bisulfid is the most commonly used method for destroying weevils in stored grain. The amount used depends upon the size of the building and on its tightness. If the building is reasonably tight and the infestation slight, one pound of carbon bisulfid is sufficient for every 700 cubic feet of space, or one pound for every 100 bushels of grain. In case the buildings or bins are not sufficiently tight to allow thorough fumigation, the amount of the liquid should be doubled or even tripled. If the insects are beetles and are very abundant, the liquid should in every case be doubled.

The building and bins must be made as nearly air-tight as possible, in order that the vapor may remain in all parts of the space in full strength and for the required time. The vapor must enter all cracks and crevices by diffusion. The doors and windows should be arranged so they can be opened from the outside when fumigation is completed. Care should be taken to have everything ready and in its place, so that after the first vessel has received its liquid it will be unnecessary to adjust anything. Everything should be done to avoid unnecessary delays and to facilitate the rapid evaporation of the liquid.

The liquid should be placed in shallow pans or dishes as high as possible in the bins or building, since the vapor is heavier than air and settles to the lower parts. It should be well distributed, having not more than a half pound in a place. In large bins, to hasten and equalize operation, it is well to put a quantity of the liquid in the center of the grain by thrusting into it a gas-pipe, loosely plugged at one end, down which the carbon bisulfid my be poured and the plug loosened with a rod. The liquid may be applied directly in this manner to infested grains or seeds without injuring their edible or germinative qualities.

If a building of more than one floor is to be fumigated, the operator should begin on the first floor and work upward, and after placing the liquid in the second story leave the building through a window that he can close after him. If impossible to get out from the upper story, the carbon bisulfid should first be distributed there, working downward as rapidly as possible to avoid the settling vapor.

The bins or building should be allowed to fumigate from twenty-four to thirty-six hours. The best plan usually is to apply the liquid on a Saturday afternoon and leave the building closed until the following Monday.

Doors and windows should be opened wide and the building or bins aired one or two hours before entering. Slight traces of the odor will linger in corners and other places where the air does not move freely, but these will gradually disappear.

The vapor of this liquid is highly inflammable and explosive. No fire or light of any sort should be allowed about the building while the fumigation is in progress. The application should always be made in daylight, for artificial light of any sort is dangerous. Electric lights must not be used, since when turning them on or off there is always danger of producing a spark. Nor is it safe to have heat of any kind in the building while the fumigation is in progress.

This treatment if properly done will kill all the weevils. The only safe method of keeping weevils from stored grain is to give it this treatment, even though you may not have noticed the presence of the weevils.—G. C. W.

Heirs Inherit Homestead Right.

If a man takes up 160 acres of land under the desert land entry, then buys a 160-acre homestead from another that has been proved up on, can he file an additional homestead under the 320-acre homestead act. Could he make filing if he deeded all his land already owned to his wife?

If a man and his wife both died one year after making application for the additional, leaving no heirs, only father and mother, does his filing still hold or does it revert back to the government? If not, does his father or mother have to comply with the homestead law in regard to proving up on said land?—A. B. Y., Routt county, Colo.

An unperfected desert land entry is not "owned" by the entryman, and need not be computed in the qualifications of a homesteader as to the ownership of the land. The land purchased is all that he owns, and where it is only 160 acres he is not thus disqualified as a homestead entryman.

Upon the death of a homesteader, the unperfected entry is cast upon those who take by descent under the state statute, and if the homesteader leaves no widow, then the father or mother, if living, take the homestead and can make final proof.—Mary Wolf Dargin.

Leafy Alfalfa Best for Cows.

Which cutting of alfalfa is considered best for dairy cows?—R. P., Teller county, Colo.

It is generally considered that the later cuttings of alfalfa are better for milk production than the first cutting. The kind of alfalfa hay best for milk cows is that containing the maximum of leaves and small stems. Alfalfa which is very coarse and stemmy is not eaten up clean by cows. The more leafy hay contains a larger proportion of protein than the coarse hay and protein is essential to the production of milk. Horses will clean up stemmy alfalfa if it is bright and clean, and it is better for them than the finer hay.—G. C. W.

Mining Claim Right.

Can a mining claim in Arizona be held for agricultural purposes, providing owner keeps up assessment work? Can a mining claim be included in homesteading?

A quarter section of land has been held in this community by three different claimants who have improved it to the extent of about $5.000 in fences and buildings. Two years ago this land was open to homestead. Will the present entryman who filed at that time have legal difficulties in obtaining title, and can he pay out and obtain title at an earlier date? Another party claims about fifteen acres of this homestead on the ground of prior location.—F. E. C., Arizona.

A mining claim cannot be held for agricultural purposes. The mining law contemplates a discovery of mineral and development of the location for its mineral deposits. Assessment work cannot take the place of discovery, and only entitles the locator to possession as long as he is in diligent prosecution of the work leading to discovery.

A homestead entry cannot embrace a mining claim which is validated by discovery and in the possession of another.

A settlement right is good only so long as the settler remains in possession. Whenever he abandons the claim, the land is subject to settlement, and entry if surveyed, by the first legal settler or applicant who complies with the law. A settler must first have an entry before he can begin to complete title, and whether the entry is subject to commutation depends upon whether it is 160 acres of land not affected by the Acts of July 14, 1917, or June 22, 1910, or a Forest homestead. Entries of more than 160 acres are not subject to commutation under any circumstances.

If you mean that the 15 acres claimed adversely to the homesteader is held under mineral location, then if the location is valid it will defeat the homestead claim to the extent of the location. —Mary Wolfe Dargin.

Neighbor Must Fence Out Cattle.

I have stock running on a rented tract of land. The fence between this land and my neighbor is in bad shape and he has crops on his side. He refuses to fix up his half of the fence. If I fix up my half can he compel me to keep my stock out in order to protect his crop?—J. C., Montana.

The owner of the crops is required to fence out the cattle.—Hamlet J. Barry, Equitable Bldg., Denver.

Four burlap sacks, each containing 75 pounds of ice, and hung from the roof of a stock car, will reduce the number of hogs dying on the way to market.

Wanted—Position as star boarder; leaving present location account owner having joined cow testing association. —A. Low Tester.

VETERINARY ADVICE.

Questions in this department answered by Dr. George H. Glover, head of the Veterinary Department, Colorado Agricultural College.

Cow Has Garget.

One of our milk cows has had swollen lumps in her udder and on her neck. She has failed considerably in milk and now gives lumpy, stringy milk. She seems well in other ways and has a good appetite. The swelling has gone down. What can we do to get her to giving normal milk?—E. E. A., Jefferson county, Colo.

The cow is affected with mammitis, commonly called garget. This is probably due to infection, and unless you are careful, it may spread to your other cows. Milk the diseased cow last, to avoid danger of infecting the others from the hands.

Milk frequently, and give laxative food. One pound of glauber salts may be given. Apply hot poultices by means of a suspensory bandage, placed around the body and twisted at the top. Massaging with mild liniments would be helpful. A 3 per cent sterile boric acid solution is sometimes injected into the udder through the natural opening in the teats.

The curdling of milk in the udder is caused by acid secretion incident to infection. Bloody milk is caused by hemorrhage when there is considerable irritation. The cow, if not neglected, should recover within a few days. As long as the milk is curdled, showing inflammation in the deep structures of the udder, the milk should not be used.—G. H. G.

Opening in Teat Closed.

It is very difficult to get the milk from one teat of one of my cows. I have to milk a long time before the milk comes and then only a tiny stream. I have inserted a darning needle in the opening but it does not seem to help. It is not sore. What can I do for the trouble?—A. M. D., Routt county, Colo.

Chronic catarrh of the glandular tissue of the udder, also of the ducts and milk cistern, results in proliferation of connective tissue, which finally occludes the milk ducts, and may result in a small tumor which can be felt at the upper margin of the teat.

The cow simply becomes harder to milk until finally no milk can be forced through the teat. These cases are practically hopeless. Where there is a tumor at the upper end of the teat which obstructs the milk flow, surgical removal of the tumor gives relief for a time, but it is not liable to be permanent. Another difficulty lies in the fact that the inflammation usually spreads to the other quarters of the udder until the cow is ruined for milk purposes. This may require three or more years.

The predisdosing factor in the prevalence of udder diseases is the high development of the mammary gland. The cow has been bred for milk production, until now if she is to be rated as a real cow, she must give enough milk for four calves, although she normally gives birth to but one.

Being predisposed to udder diseases by intensive breeding, the exciting causes are not wanting. Incomplete or irregular milking, injury to the udder, pressure caused by lying on a rough, uneven surface, chilling of the udder by lying on a cold plank or concrete floor, and lastly and most important of all, infection by irritating germs. Surely the modern cow has her troubles. It probably will be necessary later to fatten the cow for the block.

Introducing a darning needls through the natural opening in the teat is a dangerous practice. If it becomes necessary to introduce an instrument, it must first be disinfected, likewise the external opening of the teat canal. Infection of the udder, with inflammation, gangrene, loss of a quarter of the udder, or even death of the cow, is liable to result from introducing a dirty needle.

There are several kinds of inflammation of the udder and due to many causes. In this instance it appears to be chronic interstitial inflammation, without swelling, heat, pain, or fever, and may have resulted from a previous attack of acute inflammation. If I am correct in estimating this condition, nothing can be done to save the cow for milk production.—G. H. G.

Tumor on Cow's Udder.

Three months ago a lump as large as a hen's egg came on the udder of our cow up on the back of it. It is loose under the skin and never gets sore. Lately small warty lumps have come on the udder down the back part and on a few of the teats. We have discontinued using the milk for fear it might be some dangerous disease.—J. D. J., Arapahoe county, Colo.

The tumor mentioned as first appearing on the cow's udder is probably an enlargement of the mammary gland. This gives slight suspicion of tuberculosis, but otherwise in itself is of little consequence. This gland represents the principal lymphatic node of the udder region and in any diseased condition of the udder is liable to become swollen. If the gland continues large the cow should be tested for tuberculosis. The warts on the teats and udder had best be treated by application of castor oil twice daily until they disappear.—G. H. G.

Cows Gives Abnormal Milk.

A Jersey cow which we purchased gives milk which seems rich, but the cream does not rise as it should and in churning the butterfat will not separate, leaving the milk almost as rich and yellow as before churning. The cream seems sticky and stringy and leaves the separator disks so gummy that they stick together. When the cow is fresh she gives nearly four gallons a day, but in about ten days begins to fall off and in three months gives only about two gallons. We have milked her through three lactation periods and she has been the same each time. She seems perfectly healthy and keeps fat all the time. What is the difficulty and is there any remedy?—B. F. B., Montana.

It is my opinion that you are dealing with an abnormal milk which has been rendered such by a specific bacterium or germ. Stringy or viscid milk is usually due to bacillus viscosis. About the only advice we can give you at this time is to thoroughly sterilize by boiling for not less than ten minutes every utensil and all the equipment with which the milk comes in contact after being drawn. To facilitate the disinfectant process, it would be well to add a tablespoonful of baking soda to each two gallons of water. You may find it rather difficult to so treat your separator, due to size, etc., but in case it can not be boiled, it should be thoroughly disinfected by some good chemical agent which you should be able to secure from your creamery or from the drug store. The product known as B. K. is very efficacious. In case this is not available, consult your druggist and have him direct you as to the proper preparation of some chlorine disinfectant. The druggist usually has on hand tablets which when added to the proper amount of water, makes a desirable strength for disinfection.

If after you have carried out the above instructions, and the milk is still abnormal, about the only further advice which we can give you is to consult, if possible, a veterinarian, who may be able to administer treatment to the udder, or if this is not feasible, gradually dry up the cow, discarding the milk in so doing.—Wm. H. Feldman, C. A. C.

Cow Has Cough.

One of my cows coughs considerably. She gives a good flow of milk. Three weeks ago she calved and the calf is in very poor condition as compared with the other calves. I have had some tests made for tuberculosis, but they do not show signs of the disease. What can I do for the calf?—J. E. G., Ouray county, Colo.

With cows, a cough is no special indication of tuberculosis. There are many things that cause cough and I cannot possibly guess which one it is in this instance. It is frequently caused by digestive disturbances. Musty or dusty food will always cause cough. Mechanically injurious plants must be considered in this connection, such as foxtail, barley-beards, etc. Among other causes are: Irritation anywhere in the respiratory tract from parasites, tumors, and foreign bodies; organic diseases of the heart, especially insufficiency or stenosis of the mitral valve. Examine the region of the throat for tumors, the base of the tongue, and the mouth.

Wean the calf and give him special care until his condition shows improvement.—G. H. G.

Cow Fails to Clean.

What can I do for a cow that fails to clean after calving? I have been using a patent breeding powder highly recommended, but it fails to bring away the afterbirth.—R. P., Teller county, Colo.

Administration of medicinal agents in the womb of a cow which fails to clean after calving is a rather precarious procedure in the hands of the layman. We would strongly urge in this instance, if it is possible, that you place the case in the hands of a veterinarian. If one is not available, it may be imperative that you attempt a removal of the afterbirth, by manual manipulation, that is, by introducing the hand and arm into the womb and bringing the material out. In attempting this, however, one should emphasize the necessity of absolute cleanliness. Unless the hand and arm has been thoroughly scrubbed and washed in an antiseptic solution before introducing it into the womb, serious consequences may result in the way of infection.—Wm. H. Feldman, C. A. C.

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"Did you break it gently?"

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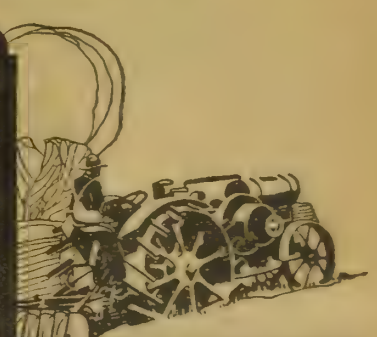

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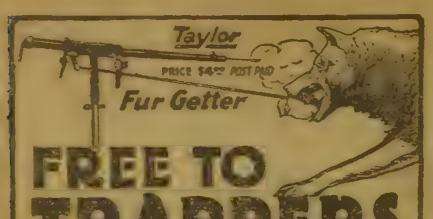

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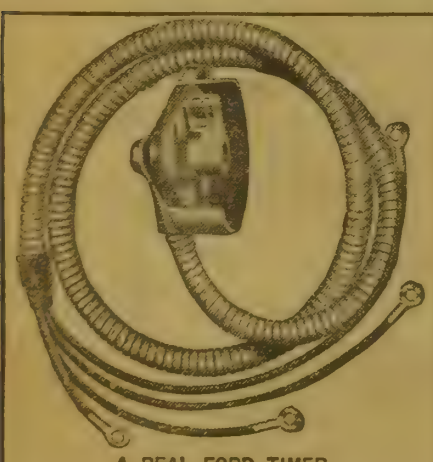

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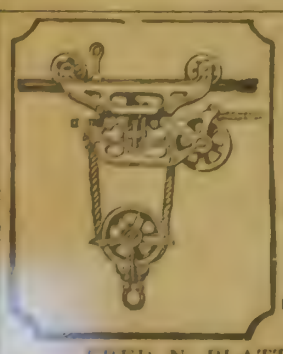

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Trapping Is Old Occupation.

Trapping wild animals is one of the oldest occupations of man. Ancient man engaged in catching wild animals solely to obtain skins for the making of warm clothing, using a pitfall consisting of a hole in the ground covered with light sticks and set with a bait in the center. Later on the deadfall and snare came into use as a means of capturing animals, proving more successful than the pitfall. Trapping later was carried on for the profit to be made from the sale of the skins. This continued with varying degrees of success until Sewall Newhouse invented the steel trap, some type of which is now universally used by trappers everywhere.

With the advent of the steel trap trapping become a thriving industry in America, and at the present time the trapping, buying and selling of raw furs constitutes one of our country's largest commercial enterprises. There are, today, hundreds of fur-buying houses located in all parts of the country which annually employ hundreds of thousands of men to handle the nation's fur crop.

In some sections of the country trapping has been carried on so extensively that the fur-bearing animals have become almost extinct. In those states where the fur supply has seemed in danger of extinction, laws have been enacted prohibiting the taking of such animals except during certain specified months of the year, and all trappers should become acquainted with, and abide by the laws of his state. Even though there is no law protecting fur-bearing animals in your locality, you shoulid not set out your traps before the first of November. Furs do not become prime before this date, and though you may obtain a few more pelts by beginning earlier, the poorer quality of the fur will mean a financial loss to you.

Though it will be several weeks before you should begin to set out your line of traps, now is the time to look over your old traps and see that they are all in working condition when the time for trapping arrives. Also it is a good plan to scout around a bit over your proposed trapping territory as this will give you a better idea of where the animals seem to be congregating. At times, animals seem to come together in bands of considerable numbers and by looking for signs beforehand you will have a big advantage over the one who has not done any scouting before the trapping season opens.

Due to the great depression in the fur trade during the two years immediately following the war but very little trapping was done in most sections of the country throughout that period, thus giving the animals a chance to increase in numbers. Prospects for the coming season are very bright. Prices on all kinds of fur, which began to come back to normal during last season, will likely be higher than at any time excepting the inflated price period during the war, judging from present market forecasts. This together with a larger supply of all kinds of fur-bearers in all sections of the country should render the profits of trapping well worth going after this winter.

It wil pay big in dollars and cents for every farm boy or man who has a little spare time to order a dozen or two new traps for the coming season. These can usually be obtained at the lowest market price from any of the fur houses advertising in Western Farm Life.—Emil C. Wahlstrum.

Ship Furs Direct to Market.

Your furs are valuable and you want your returns on them to be just as large as possible. The way to get every bit of value for your furs that the market affords is to send them directly to the market.

The more hands your furs pass through on their way to market, the greater will be the handling expense, for each individual between you and the market must take his own profit. Consequently this profit taken by middlemen must necessarily come out of your pocket and result in lower prices for you.

When you ship directly to the large, reliable fur house, in the big fur market, your furs go over the shortest route to their destination. And even though you are shipping a great distance from home, the money you save by selling your furs this way more than compensates for the trifling shipping expense.

However, we recommend doing business with houses of reliability. First be sure of the honesty and ability of the fur house and then you can feel confident you will get satisfactory returns.

What Influences Gluten in Wheat.

What produces low or high gluten content in wheat?

This question is being asked by many farmers this year. The content is low, and this fact has cut the price.

Millers and bakers are interested in two things in wheat—high weight per bushel and high quantity and quality of gluten. The former means a high yield of flour per bushel of wheat. The latter means a large quantity of bread per barrel of flour.

When most of the wheat is rich in gluten, the weight per bushel determines the price. When the gluten content is low, that is also an important factor, as in the present year.

L. E. Call and P. L. Mann of the Kansas Agricultural College, authorities respectively in the growing and the milling of wheat, have worked out the factors that affect gluten content. Here they are:

1. Weather conditions, comprising comparatively light rainfall during the growing season, fairly warm weather during the months of spring growth, and dry, hot weather toward the end of the ripening period.

2. Soils rich in nitrogen and heavy in texture, new prairie soils and soils that have been in alfalfa for a number of years usually produce wheat high in gluten. Clay and silt loams have the right texture for this purpose.

3. The kind of wheat planted—a less important factor than weather or soil. Any pure seed of Turkey type, such as Kanred, Turkey Red or Kharkoff, is all right. Soft varieties of wheat, developed in humid regions, are not desirable for regions where hard wheat can be grown.

Handling Alkali Land.

I have a piece of land that is so alkali that it is unprofitable to farm in most crops. It will produce any kind of a crop in spots, while others remain bare. What we call here "alkali weeds" grow rank over almost all the ground. Oats sown on this ground last year appeared to be coming along first rate until these weeds came up and soon got the best of the oats. I am just now plowing this ground, which is nearly all green with weeds. The ground is moist and plows up mellow. I am thinking of getting this ground ready and sowing it to barley. I could not get the seed planted before the first week of June. Do you think this too late for barley, and do you think barley would do any good on this kind of land? I have been told that barley was a good crop on this kind of land, but I know nothing about growing barley myself.

I want to get this ground seeded to alfalfa and sweet clover, and am thinking of sowing about ten pounds alfalfa seed and about ten pounds of sweet clover seed. Mix the seed and sow at the same operation, with the idea that where the alfalfa won't grow the sweet clover will. Would you sow this seed with the seeder attachment at the time the barley is sowed, or wait until the barley is harvested, in case there is any to harvest, and then sow the alfalfa and clover by means of a disk drill? You understand this land can be irrigated and if the water is kept off the ground will get as dry and hard as any land. Any advice or suggestions you can give me on how to handle this land will be appreciated.—J. F. C., Otero county, Colo.

You evidently have a very good idea of the adaptability of different crops to different conditions. The practice you have followed is good, namely, to deep plow this patch of alkali land. By so doing you may be able to distribute the alkali through a larger depth of the surface soil. To get this distributed and get the soil in shape means a considerable amount of time in the spring, all of which points to only one possibility, namely, late planting. Barley is about the only crop that will respond to such late planting. While it is better to plant early, barley may be planted well into June with a hope of obtaining a fair harvest. We have seeded barley in more than one location in the state as late as July 4 and still have obtained something of a crop. In our altitude such late planting is not possible with any other of our common grains.

You will probably find it quite possible to grow sweet clover. Alfalfa may not be so easily established. It is possible that you may be able to get Grimm alfalfa to grow on such a spot because Grimm has a branching root system in addition to the tap-root system which is common to all alfalfas, or nearly all. Because Grimm does have this branch root system it will grow in places so wet that common alfalfa cannot be produced.

It is probable that this alkali spot, which is evidently over-wet, cannot be completely corrected without drainage. There may be other problems besides drainage, but these are not indicated in your description of conditions.—Alvin Kezer, Agronomist, Colorado Experiment Station.

Good pasture and plenty of exercise are necessary for bred sows.

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Working Out Proper Rotation.

"We are planning to develop a small dairy ranch," writes one of our readers in Otero county, Colo. "My brother and I are working together. We expect to keep from eight to twelve good milk cows and from 500 to 1,000 White Leghorn hens. We also will keep about twenty stock cows and some young cattle to make use of our 640-acre pasture which I proved up on as a homestead. We are just purchasing a 75-acre tract of irrigated land adjoining this homestead. The soil is quite sandy and cannot be farmed very successmully without irrigation on account of its thin character and its tendency to blow. After seeding down to alfalfa for from six to eight years it can be broken up and will produce excellent crops of corn and wheat."

He stated that alfalfa, corn and wheat are the principal crops grown, the method being to seed a field of alfalfa and use it for hay and seed for six or eight years and then change to corn and wheat. "I would like to diversify more," he writes, "and have wondered if I could substitute the following rotation and successfully build up the soil as rapidly as by keeping it in alfalfa so long: First year, corn with soy beans, using part of the crop to fill a 12 by 30 foot silo, and pasturing the rest; second year, corn alone for grain and seed; third year, soy beans for seed alone, making this a cash crop. The fourth year I would like to use some pasture mixture, but a less expensive one than that recommended by the Colorado Experiment Station for the reason that it would be used for one year only. I would want it to contain a legume and had thought of sweet clover. My plan is to divide this 75-acre tract into five 15-acre fields, seeding one field to alfalfa each year and at the same time breaking out the last field seeded."

In order to make this rotation plan of our correspondent complete a green crop should be plowed under every other year. This can be done without any interference with the regular program as planned. As soon as the corn is off the land it can be seeded to fall rye at the rate of about forty pounds to the acre, disking it under and harrowing to smooth. This can be pastured in the fall and winter but not later than March 1. About June 1 it should be irrigated to supply moisture for the next crop and a few days afterward plowed under. The field should then be harrowed and packed and made ready for planting to corn.—E. R. Parsons.

Learning to Co-Operate.

Buying a ton of flour together was the first effort at co-operation in our neighborhood. We had just organized our Farmers' Union local. We got into a quarrel and almost failed of our object because each individual wanted his own particular brand of flour. When we had carried our discussion to the point where it was apparent we were about to fail because the other fellow wouldn't agree to the purchase of our pet brand we all came to the conclusion that co-operation meant more to us than the name printed on the outside of any flour sack. We bought our ton of flour and had learned the first lesson and taken the first step in co-operation. Ten years have now passed and we have learned to do many things in a co-operative community way instead of as individuals.

When solicitors for the Farm Bureau came into this county for a membership drive we were all from Missouri and had to be "shown." From what we had read in some of our papers we felt sure that we wanted nothing to do with it. They began making plans to canvass our county anyway, so we invited J. M. Ryan and his solicitors to come to a meeting of our local so we could have it out with them. At this meeting we put the matter up to them as follows: "We are a group who do things as a community. If this farm bureau is a good thing for any of us, it is good for all of us; if it is not a good thing for all of us, none of us want anything to do with it. When we are through with you tonight we will be for the farm bureau or against it. If we are not for it, you might as well pack up and leave this township." The meeting continued until past the midnight hour and it was a lively session. We found out the things we wanted to know and the next day most of us became members of the farm bureau organization.

The farm bureau work in this community is carried on in our Farmers' Union local. We have a committee on crops, one on livestock, one on poultry, one on insect control, and one on pocket gopher extermination. At each meeting a report is made by each of these committees, the members of which are on the look-out at all times for anything having to do with their particular line of work. W. W. Houghton, county agent, and Lloyd C. Swihart, president of the county farm bureau, both members of the Farmers' Union, meet with us and help organize for our different campaigns.

We feel that our state and national officers could learn a lesson from the manner in which we have solved the relationship between the Farmers' Union and the farm bureau. We believe that a much greater service could be rendered to the membership of all farm organizations if their officers would co-operate on a constructive program, instead of spending time and effort tearing down what someone else is trying to build. No farm organization has any right to exist except as it renders service to its members. As members we do not pay dues in any organization to give certain men the glory of leadership or to advance the policital interests of any individual.

In regard to a national grain marketing plan we do not care in this community whether it originated in Chicago or St. Louis. We do not care whether it had six "dads" or seventeen. What we want is a national grain marketing plan put into operation. We do not expect any marketing plan to be perfect in the start, but we can correct its faults and strengthen its weak places as we go along.—R. E. Bucknell, Jewell County, Kansas.

World's Wheat Production.

The world's wheat crop this year, excluding Russia and Mexico, is estimated by the United States Department of Agriculture at 3,019,526,000 bushels, based on actual estimates from reporting countries and estimates based on condition reports. Production in 1921 was 3,059,596,000 bushels, and for the pre-war 1909-13 average 2,890,353,000 bushels.

Decreases occur in nearly all European countries. Total European production is estimated at 1,100,991,000 bushels, compared with 1,239,256,000 bushels in 1921, and a pre-war 1909-13 average of 1,275,157,000 bushels. British India and Japan will have 392,847,000 bushels, compared with 282,094,000 bushels last year, and 375,827,000 bushels, the pre-war average. Both Canada and the United States show increased production over last year with a combined estimated outturn of 1,125,968,000 bushels, compared with 1,095,751,000 bushels in 1921, and 883,810,000 bushels, the 1909-13 pre-war average.

Russia reports favorable crop conditions, and according to advices from all sources will be able to feed herself this year. Last year Russia imported wheat. Production figures for Mexico are not available, but last year 5,089,000 bushels was produced, according to an unofficial estimate, compared with the 1909-13 average of 9,995,000 bushels. For Africa, a total production of 57,587,000 bushels is estimated, compared with 81,398,000 bushels in 1921, and with the pre-war 1909-13 average of 73,134,000 bushels.

Total production in the Northern Hemisphere, according to actual estimates from reporting countries, will be 2,200,650,000 bushels, compared with 2,143,979,000 bushels in 1921, and with 2,020,276,00 bushels, the pre-war average. Estimates based on condition reports bring this total up to 2,677,393,000 bushels, compared with 2,697,499,000 bushels in 1921, and with a pre-war average of 2,607,928,000 bushels. Total production in the Southern Hemisphere for the last harvest season is estimated at 342,133,000 bushels, compared with 362,097,000 bushels in 1921, and with 282,425,000 bushels, the 1909-13 pre-war average. The acreage of the growing crop in Argentina is estimated to be larger than that of the crop just harvested.

Livestock in New Mexico.

Milk cows in New Mexico increased 42 per cent, hogs 63 per cent, and mules 5 per cent, and their values decreased 24.5, 55.9 and 27.3 per cent, respectively, during the last year, according to a report of Dr. R. F. Hare, state statistician of the Bureau of Markets and Crop Estimates. The report shows a decrease of 49.3 per cent in the values of all live stock for New Mexico, as compared with a decrease of 41.5 per cent for the United States.

There is about as much danger of getting too much milk in the diet as there is of breathing too much pure air.

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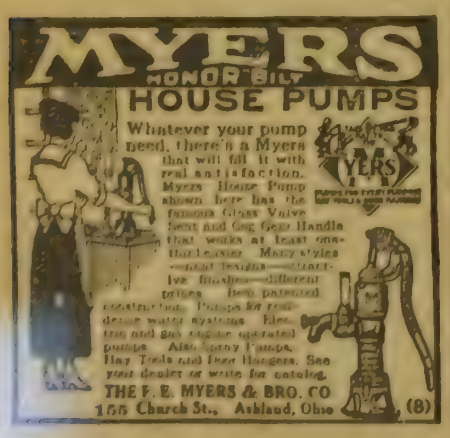


The Rural Household

Questions about home problems promptly answered by letter and through the magazine. Letters from women containing helpful suggestions for improvement of rural life are always welcome. Address all communications to Mary G. Collopy, Editor Home Department, Western Farm Life, Denver, Colo.

Bridge of Yesterday.

Over the bridge of yesterday
My thoughts have turned tonight,
And out of the far-off distance
Comes a tender, glowing light.

And centers around a friendship
That has lasted through time and tide,
Though the chance and change of fortune
Has severed our pathways wide.

It may be that earth's tomorrows
Hold for us no meeting place;
It may be that only in heaven
I shall meet you face to face;

But when memory seeks a pleasant trip,
And the choice of a pathway comes,
I choose the bridge of yesterday
To the days when we were chums.

—Requested by Reader.

The Mail Carrier Came.

Already, we have begun to receive those letters we talked about in the last issue. In a short time your letter will be here. Remember, your name is not published if you do not wish it. You wouldn't think of driving by a neighbor who was walking to town. No, you would stop and say "Let me give you a lift!" Behold us! All the members of your Western Farm Life family are walking along life's roadway with its ups and downs. Will you give us a lift? The following lifts came from a Colorado mother:

"Do you need a new dishpan? Try one which is oval in shape and you will never want a round one again. It fits into the sink and it accommodates the dishes so much better; it also fits into a smaller place on the table.

"A soap container which costs ten cents at any store, saves the small pieces of soap which are left from the laundry and prevent particles of soap from adhering to the dishes in the pan.

"In using paper patterns I find it more convenient to take four or five cups or glasses and invert them upon the pattern when it is placed on the goods, rather than pin it. The cups hold the pattern firmly and can be moved more easily than taking out pins."—Mrs. C. M., Colorado.

My Neighbor's Story.

The following letter came from one of our readers, formerly a teacher, now the mother of three fine children:

"Now that school is beginning, do not expect the children to take much responsibility at home. Could you make out a program of work and under each child's name write what chores he should do before and after school? Do not expect his mind to be on the work at home but rather, show your interest in his school work. That is his real work now for nine months and to make progress he must be interested. And so must you. Do find time to know his teachers and to visit school occasionally. You will find him more interested and doing better work and the little quarrels and unpleasant times will disappear as you understand his school life."

Hot School Lunch.

Many of our up-to-date country schools are serving one hot food during the cold weather to supplement the cold lunch brought from home. The advantages of the hot lunch may be summed up as follows:

1. The health of the children will be improved.
2. The children will be more alert mentally.
3. Table manners will be improved.
4. Useful knowledge of home work will be obtained.
5. The hot lunch will bring closer cooperation between home and school.

Farmers' Bulletin No. 712 gives many helpful suggestions on preparation of the basket lunch and Extension Bulletin No. 169-A gives suggestions for establishing a hot lunch. These bulletins may be obtained free from Extension Service.—Miriam M. Haynes, Leader Home Demonstration Agents, Fort Collins, Colo.

Home Cured Dried Beef.

Home cured dried beef is a delicacy that no farm home should be without. The hind quarter of a thin cow is suitable for this purpose, and in cutting up the quarter, one should start near the back and carve out the large muscles without cutting across them. This will give irregular shaped pieces of meat which can be cut across the grain when dried.

Make a mixture of 5 pounds salt, 3 pounds sugar, 2 ounces saltpeter for each 100 pounds of meat. Use one-third of this mixture to rub into all surfaces of the meat, then pack the meat in a barrel. After three days, take out, rub with another third of the mixture and repack, this time putting at the bottom the pieces which were on top before. Leave the liquid which appears in the barrel, repacking the meat in it. At the close of another three days, repeat the process, and leave for three more days. The meat may then be taken out, allowed to drain a day, smoked, and hung up to dry. It needs no covering when dry except to keep off the dirt.—Extension Service, Colorado Agricultural College.

Blind Woman Culls Hens.

Culling hens is largely a matter of feeling and it stands to reason that a blind person could learn to successfully select the producers and throw out the drones. Mrs. J. E. Bushnell, a blind woman who attended a poultry culling demonstration near Clifford, Colo., in August, demonstrated that she could cull successfully.

Mrs. Bushnell says it does not pay to keep poor hens. During the demonstration she asked to examine some of the hens. "This hen is not a good one," she said of the first one on which she got her hands. She was then given the best hen in the flock, which was being used for demonstration. After running her hand carefully over the hen's body, she said: "This is an excellent hen. I wish all mine were like her."

With but very little help, Mrs. Bushnell has raised 300 fine Rhode Island Red chickens and has cared for one hundred hens this year. She has developed her sense of touch to such an extent that she can weed her own garden.

Can the Cull Hens.

"Can the Culls" was adopted as a slogan in El Paso and Montrose counties, where the number of hens culled totaled 30,420. Mrs. H. J. Ryan, home demonstration agent for El Paso county, has prepared the following recipe:

"Kill the chicken, dress and draw at once. Allow to stand for twenty-four hours in a cold place. Cut into convenient sections, scald in boiling water for about three minutes. Then cold dip until cold. Pack in sterilized jars, dip rubbers in boiling water, place on jar, add one teaspoonful of salt to each quart. Fill the jar with boiling water to within one inch of the top. Put on the lid and partially seal. Process in hot water for six hours. Or in a hot water bath for one hour in each of the three days. Remove from canner and seal. Test jars when cold and store in a dark, dry, cold place."

The culling season is over, but there will always be cull hens to remove from the flock and this recipe is good any time.

Parent Teachers' Association.

A very wise man once said: "A mule cannot pull while he is kicking, and he cannot kick while he is pulling." Neither can you. Read this until you believe it, then stand behind your teacher. Make your parent-teachers' organization a useful agent for the accomplishment of worth-while things this year.

A Western Farm Life Baby.

Robert Douglas Lancaster recently arrived in Texas. The many friends of Mrs. Erma Douglass Lancaster will rejoice in this happiness which has come to the one who did so much toward better homes in Colorado.

Our Fashion Service.

All patterns 12 cents each. Address Western Farm Life, Pattern Department, 1518 Court Place, Denver, Colo.

Read This Before Ordering: Patterns ordered through this magazine are mailed promptly from the factory at Brooklyn, N. Y., and arrive in 10 to 12 days from time order reaches Western Farm Life. Be sure to specify size and number of patterns. Write your name and postoffice address plainly to avoid delay. These patterns are handled at cost, as a service to our women readers. The price of 12 cents includes postage.

3971—A Popular Ever Seasonable Style. The apron and house dress are now considered an essential in every woman's wardrobe. Surely the model here portrayed will be much admired for its graceful lines and attractive pocket. As a porch dress or for garden and kitchen this style will be very satisfactory. The medium, 38-40; large, 42-44; extra large, pattern is cut in four sizes: Small, 34-36; 46-48 inches bust measure. A medium size requires 4 yards of 36-inch material. The width at the foot is about 2 yards.

4126—Comfort and Service Combined in a One-Piece House Frock with Knickers. Here is a house dress made for practical use. The skirt with free seam edges, and accompanying the knickers, mark this style as one that fills a long felt want. The dress may be turned up to the depth of the slashes for greater

42 New Embroidery Designs for Colored Linen Handkerchiefs

Newest designs and color combinations for this fall and for making Christmas gifts. Each package contains 42 hot iron transfers, every design original and exclusive, no two alike. Clever combinations with full stitch instructions and color schemes for applique, lace and drawn work; 36 patterns for ladies' handkerchiefs and 6 for men, enabling every woman to easily make charming gifts, ordinarily costing from $2 to $3 for only a few cents.

These patterns are not sold in stores and can be obtained only from the manufacturer. A special introductory offer is being made to introduce them. The manufacturers are sending to anyone who will write them two regular $1 sets for only $1. This liberal offer enables you to get your own patterns free, as the extra set can easily be sold for $1.

If you wish to see these newest patterns simply write the Western Pattern Company, 1435 Waldheim Bldg., Kansas City, Mo. Pay your postman $1 and postage when the sets arrive. After examination you do not wish to keep them, return the packages and your money will be promptly sent back. Be the first to have these new designs. Write today. A postal will do.

freedom and convenience. The sleeve may be in elbow or wrist length. The pattern is cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires 6⅛ yards of 32-inch material for the dress and 2⅜ yards for the bloomers. Collar and cuffs of contrasting material as in large view, will require ⅝ yard. The width of the skirt at the foot is about 2¼ yards.

3420—A Pleasing and Popular Dress Model. It is cut in four sizes: 4, 6, 8 and 10 years. A 6-year size will require 3½ yards of 36-inch material. Plaid or checked suiting, serge, challie, voile, gingham, percale, seersucker, taffeta and velveteen are attractive for this style.

4234—A Pretty Cape for the Little Girl. This comfortable model will please the "small person." It is appropriate for eponge, gabardine, broad cloth, serge and silk. The pattern is cut in four sizes: 2, 4, 6 and 8 years. A 6-year size requires 2¼ yards of 44-inch material.

4122—A Chick One-Piece Style. Fashion has put her smartest lines in this creation. The sleeve and collar are new and attractive. Serviceable pockets are concealed under the neat tabs. As here portrayed, checked eponge and linen are here combined. One could have this in gabardine with contrasting material for trimming. The pattern is cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. A 38-inch size requires 4⅝ yards of 44-inch material. To trim as illustrated requires ⅝ yard of 44-inch material. The width at the foot is 2¼ yards.

4125—A Splendid Model in Wrap Style. Stylish and very attractive in blue serge with black braid and buttons for trimming. Jersey and knitted fabrics are good also for this design. The pattern is cut in three sizes: 16, 18 and 20 years. An 18-year size requires 4 yards of 54-inch material. The width of the dress at the foot is 2⅜ yards.

4117—A Simple Frock for a Young Miss. Smart belt extensions on this dress, effected by slashes at the sides, are an outstanding style feature. The sleeve may be in wrist or elbow length. The pattern is cut in four sizes: 6, 8, 10 and 12 years. A 10-year size requires 3½ yards of 32-inch material. Serge, crepe knit and jersey weaves, also taffeta, are attractive materials for this style.

4116—Pleasing Frock for Mother's Girl. Plaid suiting with bandings of taffeta was used for this design. It is nice for the new jersey weaves, for serge and silk, and is also a style good for wash fabrics. The pattern is cut in four sizes: 6, 8, 10 and 12 years. A 10-year size requires 3 yards of 40-inch material.

CATALOGUE NOTICE.

Send 12 cents in silver or stamps for our UP-TO-DATE FALL AND WINTER 1922-1923 BOOK OF FASHIONS, showing color plates, and containing 500 designs of Ladies', Misses' and Children's Patterns, a concise and comprehensive article on dressmaking, also some points for the needle (illustrating 30 of the various simple stitches), all valuable hints to the home dressmaker.

Finishing Floors With Varnish.

Varnish gives floors a hard, smooth, glossy finish, and is easy to apply and to clean. Under hard usage, however, it is likely to wear off, leaving patches of bare wood that remain unsightly even after revarnishing. Successive coats tend to darken the floor. Varnish is a common finish for softwood floors, but wax is preferred by many for hardwood.

Manufacturers have tested and put on the market an assortment of varnishes adapted to special uses, and it is often better to buy one of these ready-made standard floor varnishes than to attempt to mix one at home.

Varnishes are roughly classified into two groups, spirit and oil. The spirit varnishes are made by dissolving a resinous substance, such as gum shellac, in alcohol or some other volatile liquid. They dry quickly, leaving a hard, brittle coating on the wood, and, with the exception of shellac varnish, are not commonly used on floors.

To make shellac varnish, take two pounds gum shellac, one-half pound castor oil, one gallon alcohol, denatured according to United States Internal Revenue formula No. 1.

Put these ingredients into a well-stoppered bottle in a warm place, and shake the mixture frequently until the shellac is dissolved. The alcohol should contain not more than 5 per cent of water, and care should be taken not to drop any water into it as it is being mixed with the dry shellac. The castor oil aids in making the varnish flexible and less brittle when dry, but may be omitted; in that case, the quantity of gum shellac should be increased to 2½ pounds. If too thick, this varnish may be thinned by the addition of more alcohol.

Successive coats of shellac varnish well rubbed down may be used alone on a floor, or one coat may be used as a surfacer on a paste-filled hardwood floor that is to be waxed. For the first coat, one gallon of shellac will cover 300 to 400 square feet of floor, and additional coats will of course require less. Parquetry floors are generally shellacked in order to preserve the light color of the wood.

The oil varnishes contain resinous gum, oil, and driers, carefully heated and blended so as to bring out certain properties. Most of the floor varnishes are of this type and of the kind known in trade as "medium oil." They dry more slowly than the spirit varnishes, but have luster, hardness, and greater durability. Spar varnishes belong to the kind known as "long oil" and contain an even larger proportion of oil, which makes them more durable and impervious to water. They are sometimes used on kitchen and bathroom floors, where those characteristics are of particular importance.

The first rule of varnishing is to have the surface of the wood and the air in the room as free from dust as possible and to use only scrupulously clean brushes. Varnish brushes are chisel shaped or slightly tapering; a rather wide one will be most convenient for this work. The varnish should be brushed on lengthwise of the grain in a smooth, thin coat without laps or brush marks and allowed to dry for at least two days. If possible, the temperature of the room should be 70 degrees F. or higher and the varnish should be applied in the morning, for it dries better during daylight. When the first coat is thoroughly dry another coat or perhaps several more coats should be applied in the same way as the first. The more coats of varnish put on a floor, the more durable the finish. One gallon of floor varnish is enough for two coats on about 300 square feet of oak floor or about 200 square feet of pine.

Community Cares for Boys and Girls.

This is the story of Fairview, a town of 1,300 people in Sanpete county, Utah. It is told here because it demonstrates the fact that community development—town building—must begin with the boys and girls. It is commended to the serious consideration of every person interested in the welfare of America. What Fairview and Sanpete county are doing for their boys and girls every other town, every other county, can do.

For fifteen years Hober S. Olson has been principal of the Fairview school; for two years he has been mayor of the town.

Because of a lack of funds the school board was unable to complete a junior high school building. Mayor Olson called a mass meeting of citizens and enough money was subscribed to not only complete the building, but to provide the apparatus for a modern gymnasium.

The new building has become the real community center. The farm bureau, the commercial club, the boy scouts, the bee-hive girls, the brass band, meet there regularly. It is used for the mass meetings, political primaries, and all kinds of public and social gatherings.

Often several meetings are held in different rooms the same evening and at the close, those in attendance join together for an hour or more of physical recreation in the gymnasium.

Games and other contests between local organizations are common, and arouse great public interest.

Every boy between 12 and 18 living in Fairview is a member of the boy scouts. He wants to be a member—enjoys being a member.

When it became necessary to discipline three boy scouts, it was found that the greatest punishment possible was to deny them the privilege of boy scout membership for two weeks.

Utah leads all other states in the percentage of boys and girls to her entire population. Out of every 100 people in the state there are twenty-nine boys and girls.

In Fairview even that great record is broken, for there are 522 boys and girls on the full-time school enrollment, out of a population of 1,326. This is forty boys and girls to every 100 people.

Mayor Olson is the leader in community development in Fairview. The value of his services to the town cannot be measured.

Boys and girls are the greatest asset of any state and what the nation needs more than anything else are real community leaders—men and women who can fashion and mold and direct the character of those who will be citizens tomorrow.—Edgar W. Cooley.

Think This Over.

The following incident actually happened at the International Stock Show in Chicago:

A doctor stood admiring a large, fat hog, when a small boy standing by piped up: "That's my father's hog. He got the first prize."

"Wonderful," said the doctor. "Certainly a fine hog." Then he looked at the boy. "How old are you, son?" he asked.

"I'm twelve past," said the boy.

"Why," said the doctor, "you are small for a nine-year-old. What do you eat and drink?"

"Just what the rest of the folks do—bread, meat, pie, potatoes, cake and tea."

"But," queried the doctor, "don't you drink milk?"

"Naw," said the boy in a tone of disgust, "we feed milk to the hogs."—Dairymen's League News.

Timely Hints.

Cook your apple butter in the oven rather than on top of the stove. This will prevent the spattering of stove and walk. It is not necessary to stir it frequently, as when cooking on the top of the stove.

Send to Colorado Agricultural College—Extension Service—for the new bulletin, "Fruit Juices." This bulletin discusses preservation of fruit juices and the making of cider.

Do you ever cook sugar beets? Many families prefer them for beet pickle.

If you cannot use all of your green tomatoes before frost, pull up the vines and hang them in your cellar. You will have ripe tomatoes for the table during the early winter months.

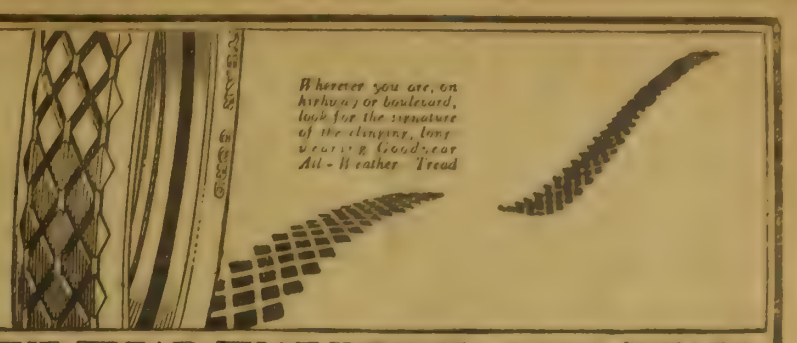
Americans Eat Half an Egg a Day.

Did you eat your half an egg this morning? According to the United States Department of Agriculture, the per capita consumption of eggs in the United States is one-half an egg a day.

The department suggests that everyone not only get his full share of egg, but eat the whole egg. Eggs are comparatively cheap just now. More eggs have been laid this year than ever before. The total runs up to something like twenty-two billion eggs, an increase of 10 per cent since the armistice.

Increased production is attributed by department marketing men to the fact that more hens are laying. There has been decreased consumption of poultry and farmers have been compelled to keep their hens on the farm. Hens must eat, and to pay their board they must produce eggs.

Time is never lost which is devoted to keeping dairy records.



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Time to Cut Alfalfa.

An Otero county reader, after reading the article in a July issue of Western Farm Life, entitled "Early Cutting of Alfalfa," which gave the results of a series of experimental tests on the best time to cut alfalfa to avoid injuring the stand, asks if the conclusions drawn from these tests do not contradict the advise given by our Colorado Experiment Station and various alfalfa experts. He says he had understood that it was advisable to disk alfalfa at least once a year and that the time to cut was when the new shoots were well started. He also asks about the practice of growing alfalfa in cultivated rows where the rainfall is not sufficient to grow it broadcast.

A careful reading of this article would show that it is not as contradictory as it might at first seem. The conclusions drawn are probably the most reliable and authoritative we now have on the handling of alfalfa to preserve the stand and at the same time get the maximum crop. Some of the earlier advice relative to the cutting of alfalfa was based on entirely too small an amount of information. The main point considered was the quality of the hay. When alfalfa was first introduced the advice on cultivation also was based on too small an amount of actual experience and observation. In the alfalfa section of Kansas disking alfalfa has not been considered as a desirable practice for a number of years. As indicated in the article referred to, cultivation either with a disk or a specially designed alfalfa cultivator is desirable under certain conditions.

Alfalfa can be grown under plains conditions in cultivated rows. The point is whether it pays or not. The expense involved might make it a losing proposition from an economic standpoint. Mr. Parsons thinks that the trouble with growing alfalfa in rows is that the farmer is usually too busy to cultivate it properly. "I know of one man," he says, "who used to make $50 or $60 an acre from row alfalfa by selling the seed crop. The man and the place have much to do with such things."

Better Prices for Reactors.

In the campaign for the eradication of tuberculosis in cattle being carried on by the United States Department of Agriculture, the states and counties, one of the most important economic considerations is the salvage, at a fair price, of the animals that react to the test. Up to a year and a half ago a large percentage of the reactors that were passed by the inspectors as perfectly fit for food did not bring a fair price, because some buyers took an unfair advantage of the seller and profited unreasonably.

The Department of Agriculture through the Bureau of Animal Industry and the packers and stockyards administration has been looking into this matter for a year or more, taking it up with packing concerns, commission men, and organizations interested in the marketing of livestock. As a result much better prices are now being paid. Reports to the department show that the prices being paid for such cattle in various parts of the country are getting very close to the prices paid for the same class of cattle on the regular market. A special traveling inspector now spends all his time visiting livestock markets, noting prices that are being paid for reactors and insisting that buyers who are discriminating against them pay a fair price.

Carcasses of reactors that have been passed by the Federal inspectors are worth as much and are as wholesome as any other carcasses. There is no warrant for price discrimination against them. Many of the leading packers at the big markets and a large number of smaller concerns on many markets now see the justice of this view, with the result that reactors are now selling at more nearly fair prices.

The department has compiled figures on the prices received for reactors in a number of states for 1921 and 1922, and in several of them the increase in avereage price has been considerable, in a few instances reaching more than 100 per cent. In Kansas the average price paid for these cattle rose from $16.52 to $34.26; in Minnesota from $17.74 to $24.48; in Missouri from $15.60 to $31.93; in Wisconsin from $16.09 to $26.25, and in Vermont, where only one [illegible] been handling them previously, from $5.61 to $16.29.

In eighteen states, including the live-stock and dairy states of the Middle West and a number of eastern states, the average price paid increased about $4 a head. The department expects that continued efforts on the part of the bureau and the packers and stockyards administration will result in still better prices for reactors.

Packers, commission men and livestock exchanges are getting behind the movement for better prices since they have been impressed with the fact that the encouragement of the work of tuberculosis eradication means more and better business in the future. The Institute of American Meat Packers passed a resolution calling upon the members to pay as much for reactors as for untested cattle of the same quality.

In connection with this discussion of prices, it is well to keep in mind according to department officials, that the area method of eradicating the disease has an additional advantage in that more reactors are available from one place at one time and, consequently, can be shipped at less expense and can be handled more economically at the yards and in the packing house.

Government Hunters Make Record.

More predatory animals were killed in Colorado during the month of April than in any other month this year, according to reports received by the United States Department of Agriculture. One Biological Survey hunter in that district has a record of 14 wolves, 125 coyote pups, 125 unborn coyotes, 32 coyote females, several males, and several mountain lions. Cattlemen who have been suffering heavy losses in the Divide country from predatory animals are co-operating heartily with Federal hunters in getting rid of wolves and coyotes.

One family of notorious killers, consisting of an old male wolf, a female, and their annual crop of puppies, was killing from 40 to 50 per cent of the calves on some ranges near DeBeque. The loss was so severe that stockmen had decided not to put any cattle on these ranges this season because they could not save the increase from the wolves. Bounty hunters were able occasionally to clean out the whelps, but the old pair persistently eluded capture until this April, when a Biological Survey man was sent to DeBeque. He found the wolf den and succeeded in killing six puppies. The seventh puppy was trapped a few days later. The trail of the old wolves led for miles south of DeBeque, then turned north and over into Garfield county.

Traps were set along the trail and the old male was finally caught in one of them about eighteen miles north of Grand Junction, or fifty miles from the original den at DeBeque. Two weeks later the female was trapped in the same locality. Both animals were about fifteen years old. The female had lost one foot, presumably in a trap. The pelt of the male was more than six feet long.

The First American.

(Continued from Page 7.)

fast as I could. I turned a corner, then another, to avoid chance of pursuit.

Faith! My first evening in Paris seemed to be one succession of efforts to get away from persons overanxious to keep in touch with me. And again came that wave of homesickness for America.

I rounded still a third corner, and came out in a little square. The space was lighted by the flares of several linkboys, and it was noisy with laughter. Thinking to lose myself inthe crowd, I hastened forward.

In the gutter stood a number of loungers, amusedly watching a spectacle going on in midstreet. A party of four or five court "exquisites" whom the linkboys were attending to some revel, were grouped about a hooded, cloaked figure.

They were laughing and joking loudly, and attempting to pull the hood back from the face of their victim.

The latter was struggling, and was darting this way and that in mute terror, seeking to escape the clutching hands. As each such attempt was foiled, the crowd roared with laughter.

Thinking it some game, I was about to pass on, when, getting a better look, I saw the cloaked figure was that of a girl. Also that she was genuinely frightened.

The sight of a frightened girl or woman is one to which I have never been able to harden myself. It is to me the most pathetic thing on earth.

Heedless of the fact that I had had enough trouble for one evening to satisfy any normal man, I jostled past the youngsters and into the street among the loud-laughing gallants.

As I reached the little group, one of the exquisites succeeded in grasping the hood and pulling it back on the wearer's shoulders. She cried out. And the flickering torch flames gave back the light from a shimmer of soft gold hair.

Then it was, too, that I saw the girl's white, horrified face.

It was Claire de Sieux.

I think I must have gone quite mad. I leaped into the center of the group, scattering the gaudily glad mirth-makers as I went. One rolled into the miry gutter, to the sad detriment of his fine clothes. Another collapsed under my fist blow.

I gained Claire's side and whipped out my sword. She knew me, and, with a joyous little cry, clasped my arm.

Her gesture brought the emblazoned crest on the cloak shoulder into full view of the startled gallants. One of them pointed at it, with a yell. In a moment every one of them had his sword out.

I saw I was in for a peril that would call for all my prowess, and perhaps more. For some of these dandies of the court of Louis XIII were geniuses at sword play.

To free my own movements, as well as to give myself some sort of shield, I tore off the cloak and swung its folds about my left arm. Then I turned to face the onset.

The sudden twist of my body dislodged the snuff-box from my breast. Through one of the rents in my torn doublet it fell. Striking the cobblestones with a sharp click, the box lay there on the street; its multi-colored jewels hurling back the torchlight in a myriad rainbow rays.

I had no time to stoop and recover the bauble. Its great value in my eyes was the fact that it contained Claire's portrait. And now I was to fight for the original of that portrait.

The thought thrilled me. I am adverse to bloodshed. Yet, show me the lover who does not repoice in the chance of risking his life for the girl of his heart, and I will show you a man whose veins run ditch water instead of red blood.

But, although I gave no heed to the blazing snuff-box, the gleam of its jewels in the torchlight attracted the gaze of the rest. One of the group—a short, squat, dark youth—cried out something whose import I did not catch and pointed to the box.

The rest, lowering their sword-points, followed the direction of his gloved finger. An instant's hush fell on them, while I stood waiting and wondering.

Then the leader, straightening himself, faced me, raised his sword respectfully to the salute, sheathed the blade, and signaling the linkboys, strode away.

The others silently followed his example, each raising his blade in almost reverent salute as he passed me.

I stood there, dumbfounded—too stricken with amazement at so strange a turn of fate either to return the salute or to summon the gallants back for an explanation. And a second later, they disappeared in the night.

I turned dully to Claire.

"It is a nightmare!" I muttered half-unconsciously. "First the snuff-box brings me a duel, then the offer of a dowered bride, then capture in a great house where I seemed like enough to be put to death; and now it turns five deadly foes into awed cowards. The cloak, too——"

I broke off, ashamed of my selfish ponderings.

"You are unhurt, mademoiselle?" I asked eagerly. "Would that I had arrived soon enough to prevent——"

"It is nothing!" she answered me, though her sweet voice still shook. "You are brave! Splendid! For my sake you would have faced five armed men——"

"For your sake," I said gravely, with no trace of bravado, "I would face the whole world, and die right blithely if I might save you from grief. Come, let us move away from these idlers to some quieter spot. Is it indiscreet to ask you why you are here, alone, at night? If it is, do not trouble to tell me. All I demand is leave to guard you to your home."

We had left the square and the loungers behind us. She still held my arm lightly as though she feared to find herself alone and defenseless once more in the lark streets at night.

"I was on my way to the palace of his eminence," she said.

"His eminence? Cardinal Richelieu? Unescorted, at this time of the night? Why?"

"For protection. For advice. He is my godfather. And he seems fond of me. I hoped——"

"Your godfather Cardinal Richelieu?"

"Yes. But long before he became cardinal. He was Bishop of Lucan then, and none thought he would one day sway France. My mother was his cousin. Later, my father quarreled with him. But he has ever taken a kindly interest in me for my mother's sake."

"But," I protested, "why should you be so rash as to leave your home at night, alone, to go——"

"It is no longer my home," she murmured, with a pathetic little catch in her voice.

She hesitated, then went on, visibly trying to force back her tears and to tell me the story in its proper sequence.

"After you left us," she began, "my father's valet, Simon—he had been hiding on the balcony outside the drawing room to hear our talk——"

"The man I collided with when I spring through the window."

"He came to my father and told how I begged you to refuse to marry me. He explained that your refusal was due to my appeal and——"

"The cur!"

"My father sent for me and questioned me. I have never seen him in so frightful a rage. He was like a maniac. When I admitted that what the valet said was true, he seized me by the shoulders and thrust me out into the street. He said if ever I set foot in his house again he would kill me. My maid secretly threw down this hooded cloak to me and I——"

"Oh, you poor, frightened child! The beast! If——"

"I knew of nowhere to go for the night save the cardinal. I hoped he might intercede with my father to— Where are you taking me?" as I turned of a sudden and led her down another street.

"To your father's house," I answered grimly.

"But he will not——"

"I think he will," I contradicted. "If not——"

A deep baying caught my attention.

"That is the voice of bloodhounds," I commented. "They sound like dogs on the scent."

"They are on the scent," she shuddered. "In many of the great nobles' houses a pack of fierce bloodhounds are kept."

"But for what earthly purpose, in a city like this," I asked, recalling the hideous brutes I had seen in the house whence I had so lately escaped.

"When a dishonest servant runs away or a thief gets out of such a house uncaught," she explained, "the hounds are set on his track. They follow a scent swiftly and through the most crowded streets. Once let them catch up with their quarry, and the officers of the law can find little to do to him when the great beasts are through. It serves as a terrible warning against theft, and so is allowed. That pack are hunting some miserable fugitive now. They are in full cry. Hark! They seem to be coming nearer!"

Then I understood. Finding me gone, my ex-captors had loosed their murderous hounds on my trail!

The torn cloak I had left behind me would serve as ample scent to start the hunt. Even now, the brutes were following my recent windings and turnings. In another minute, perhaps, they would be upon us and jumping for our throats.

For myself I cared little, though a pack of huge fearless dogs are far more dangerous than mere human foes who may be intimidated by an adversary's courage or cajoled by his words.

And I did not relish the thought of being pulled down and mangled in a conflict where my strength and my sword could avail me nothing.

It was for Claire I feared. Not only would she be subjected to the horror of seeing me torn to pieces; but the maddened dogs would probably attack my companion as well as myself.

It was not a moment I care to live through again.

"Listen, mademoiselle!" I said very quietly. "It is I those beasts are after. I will wait here for them. Go on, I beg of you! As fast as you may. Then——"

"And leave you? When you have risked all for me?"

"You cannot help me by remaining!"

But her answer was to slip her arm serenely through mine.

"If you wait here," she said gently, "we will wait together!"

Ah, she had courage, that beautiful love of mine!

(To be Continued.)

Increased production may not be the solution of all the farmer's problems, but was ever a farmer prosperous who had poorer crops than his neighbors?

Radio Receiving Sets of Two Types

SERVICE IS OF PRIME IMPORTANCE IN SELECTING EQUIPMENT.

So much radio material is being advertised that one may easily be confused in selecting his equipment. The Bureau of Standards of the United States Department of Agriculture which has collected and tested many types, is providing information through the Department to extension divisions of agricultural colleges and county agents as rapidly as possible.

Radia receiving sets are of two general classes: Those suitable for receiving signals from wets, which transmit damped waves, modulated waves or radio telephony, and those suitable for receiving signals from the above types of sets and also from stations which transmit unmodulated or continuous waves. Damped waves are emitted by spark transmitting sets. The Air Mail Stations which are used for transmitting market reports are arc stations, sending on continuous waves 2,500 to 4,000 meters in length.

Crystal Detector Very Simple.

A receiving set of the first class referred to above may be a very simple set equipped with a crystal detector. Such a set can only be used for receiving over moderate distances. Most receiving sets of the second type referred to above use an electron tube detector to which may be connected an amplifier of one or more stages. The crystal detector is suitable for receiving radio telephone signals at points near-by the transmitting station. In certain localities near to radiophone sets which are broadcasting the market reports, it may be possible for amateurs to use the crystal detector sets, but the broadcasting by the Post Office Air Mail Stations is done mostly on long waves by use of continuous wave radio transmission. This does not necessarily mean that club members will have to purchase expensive equipment to avail themselves of the market news. The majority of these sets can be adapted to receive messages at the longer waves by such means as the addition of loading coils or by rewinding some of the coils in the sets. High school or college teachers of physics or electrical engineering can frequently give assistance regarding this point and others relating to the receiving equipment.

Receiving Longer Wave Lengths.

If one plans in advance, it is not essentially more difficult or expensive to obtain equipment that will receive at the longer wave lengths than at the shorter ones.

Many matters such as the wave length have not been finally determined. in fact, temporarily a reservation of wave lengths of 485 meters for the dissemination of broadcast market and weather reports has been made in order to avoid interferences from other sources. It is probable the Federal Government will regulate and assign wave lengths for all purposes.

In purchasing apparatus for the reception of radio weather, crop or market news from a given transmitting station, one should state the wave length range which it is desired to cover, name of and the distance from the transmitting station.

Any attempt to give the cost of commercial radio receiving sets is attended with difficulties. Some sets may be designed in which dependability is the sole criterion, while others may embody fine appearance with dependability. Showy, unreliable sets are not to be considered, no matter what the cost, for service is of prime importance.

Receiving Equipment Not Expensive.

A crystal detector receiving set suitable for receiving radio telephone messages from comparatively near-by transmitting stations are advertised for $10 and higher, depending on the accessory equipment included with the set, or it can be constructed at a somewhat lower cost. Reliable radio receiving equipment such as is now on the market or which may be especially built for market news reception from the continuous wave stations will probably cost completed between $50 and $200. These prices cover the range of sets from a simple electron tube detector set to the more complex receiving set complete with detector and amplifier panels, storage battery, dry batteries, telephone receiver, electron tubes, and possible some simple antenna equipment.

Radio Club on Tour.

Official recognition was given Boys' and Girls' Club work by the State of Colorado on August 29, when Governor Shoup, through his secretary, Hon. E. R. Harper, delivered a formal address over the radio from Denver to the receiving station at the Colorado Agricultural College in Fort Collins, where it was heard by members of the Boulder county clubs, who were there on a tour of inspection of the college and experiment station. Practically the entire club membership turned out and many of the young people were accompanied by their parents, the total attendance being about 400 and the procession of autos in which they traveled numbering sixty-five.

The governor's message called attention to the importance of agricultural club work and commended the young people on their enterprise in making the journey to the Agricultural College. In addition to the governor's address several musical numbers were put on by the National Guard Station at Denver, the entire program coming through clearly and distinctly, so that the audience seated on the lawn heard it through the loud-speaker from a window in the physics building of the college. The receiving station was in charge of Prof. F. P. Goeder.

The radio program was only a small part of the day's festivities. On arrival

(Turn to Page 19.)

Ropp's Ready Reckoner

A Handy Calculator for Farmers and Stockmen

It Saves You Time!

It shows at a glance the number of bushels of any grain in quantities up to a carload; the amount of hay in the stack; the cash value at a wide range of prices of all grains, by the bushel or weight; the value of cattle, hogs and produce at a wide variation in prices; the amount of butterfat in milk; wages on the basis of working days; the number of square feet of lumber in any size stick and the number of pieces in a thousand feet; the capacity of cisterns, tanks, boilers and containers; the standard weight of all grains and seeds per bushel; capacity of wagon beds, granaries, corn cribs, round and square; the fodder capacity of silos and the number of cattle they will feed for six months; interests on various amounts at different rates of interest. More than seventy points of law clearly defined.

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This little book is 3½x6 inches—just the right size for the pocket, and contains 128 pages of useful information. Once you have used it you would not be without it.

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A Rapid Reckoner given absolutely FREE, postage paid, with a three-year subscription to Western Farm Life. Subscription may be new or renewal, and renewals will be extended from present date of expiration.

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Post Office .....

R. F. D..... State.....

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This Offer brings you your farm paper, fashions and stories.

WESTERN FARM LIFE, Denver, Colo.:
Enclosed find $1.45, for which send me Western Farm Life for two years and McCall's Magazine for one year.

Name .....

R. F. D..... Postoffice..... State.....

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(A Colorado Corporation)

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Reading Matter That Is Worth While

WE RECEIVED a letter the other day from a new subscriber who said: "I have just got through reading your issue of September 15, that one of my neighbors gave me to look over. I take several farm papers, but there is so much good stuff in Western Farm Life about livestock and farming in the West that I want it regularly, so enclose $1.00 for three years." We are quoting this letter so that you good readers of Western Farm Life will know that we are getting direct results from the copies you are handing to your neighbor. There is hardly a day goes by but what some one sends in a subscription as a result of reading some neighbor's paper.

This, the October 1 Issue, A Good One.

A "Minus" Labor Income Leads to Study of Farm Leaks.
Farming on Share Lease Plan.
Water Supply of Prime Importance on Stock Farm.
Big Poultry Crop Calls for Early Marketing.
House and Senate Reach Agreement on Tariff Bill.
Cattle Market in Healthy Condition.
The Rural Household.
Colorado Produces Large Crop.
Dairying and Hog Raising.
Veterinary Advice.
Service Bureau.

Many other interesting and valuable features in this issue.

Now that the evenings are getting longer and there is more opportunity to read, both you and your neighbors will enjoy Western Farm Life more. That is a very interesting and enjoyable story we are running, "The First American." It is a good, clean story, that both old and young will enjoy. Be sure to pass it along to your neighbors.

THE AUTO-OILED AERMOTOR

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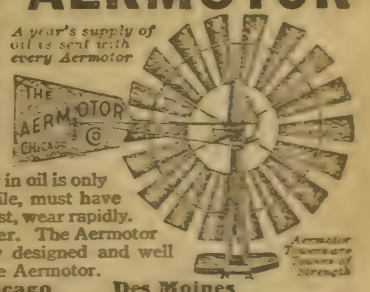

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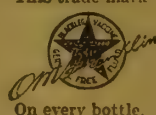

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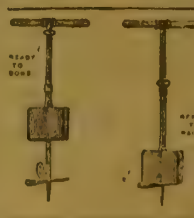

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Bulletins of Interest in October.

The following list of Farmers' Bulletins and Circulars to be issued during October by the United States Department of Agriculture, will be of value to many of our readers. Copies may be obtained free by addressing the Division of Publications, United States Department of Agriculture, Washington, D. C. Specify number and name and whether Farmers' Bulletin or Department Circular: Farmers' Bulletin No. 474, "Use of Paint on the Farm"; No. [illegible], "Handling, Grading and Marketing Cotton"; No. 847, "Potato Storage and Storage Houses"; No. 927, "Farm Home Conveniences"; No. 954, "Disinfection of Stables"; No. 1067, "Feeding Hens for Egg Production"; No. 1096, "Frost and the Prevention of Damage From It"; No. 1175, "Better Seed Corn"; No. 1288, "Game Laws of 1922"; No. 1293, "Laws Relating to Fur Animals, 1922." Department Circular No. 148, "The Farm Woman's Problem"; No. 166, "Influence of Winter Rations on Growth of Steers on Pastures."

Dairying a Great Industry.

As a producer of food value nothing in this country equals the dairy cow, says Helen S. K. Wilcox in Holstein-Friesian World. Neither wheat nor cotton nor corn equal in value what she creates, and it is worth remembering that the year's production of a single well-bred animal is worth more than the whole carcasses of five 1,000-pound beef steers. Last year the American dairy cow produced almost ninety-nine billion pounds of milk, worth $2,500,000,000, and milk is only a raw material. When we consider butter, cheese, condensed, powdered, malted, milk chocolate, ice cream and half a hundred less important by-products, the value of milk in dollars and in the industries of which it is the basis becomes apparent. But we are talking of well-bred cows, and it is only too true that there are millions of scrubs on American farms which are hardly worth their keep when milk and meat and hides and hoofs have all been counted. It is because of this that the government has called a conference of dairy experts from every land. It is because of this that every now and then the press services tell of the sale of some blooded animals at a price that makes us gasp, and that the great railroads and great producers of farm implements and machinery are so earnest in their encouragement of the dairy industry.

Profitable Farm Poultry

Questions about the farm flock promptly answered by letter. Free advice on all phases of poultry production. Address all inquiries to Poultry Department, Western Farm Life, Denver, Colorado.

As yet not a single car of eggs has been shipped from Colorado. During the year 1921 California shipped 1,105 carloads of eggs and the splendid organization back of this business is appreciated when it is recalled that these eggs were shipped clear across the continent and sold at a profit. Few realize the enormous consumption of eggs in the United States. These figures should open our eyes to the possibilities for producers in this territory.

Earnest consideration should be given at this time of the year to the matter of winter housing. If your flock does not already have comfortable quarters for the coming winer it is time to get busy. Where the houses are suitable a thorough job of cleaning is in order in preparation for getting the best results from the new pullets going into the producing flock.

Selling the hens each fall showing faded legs was a losing proposition for Mrs. S. C. Tyner and Mrs. Weimer, who attended a poultry culling demonstration near Hugo. They tried selling off the lazy ones this fall—the ones remaining on the roosts until late in the morning. After selling fifty of these they found no reduction in the number of eggs. In previous years when they had been selling the ones with faded legs there was always a marked falling off in egg production. They had been selling the best laying hens.

Only four eggs were laid in a week by a dozen hens Mrs. F. B. Thomas of Cory, Colo., culled from her flock after learning how at a culling demonstration given on a ranch in Delta county. She was getting only twenty-one eggs a day from fifty-two hens and decided that was not enough. After culling out the twelve she gathered 144 eggs in a week from the forty remaining hens, an average of about twenty a day.

Selecting Hens for Breeding Flock.

This is a good time of the year to be spotting the breeders for next year. A breeder has been defined as a hen laying 125 eggs or more in a year and approaching the standard in shape and color closely enough to be considered a good specimen of her breed and variety. Hens which cannot be classed as breeders nor yet thrown out as culls can be retained as producers of market eggs.

If a hen lays well during her pullet year she should be kept for another year as a breeder. The older she is and the more culling she survives the better, for then she has proved that she has the vitality to stand up under long-continued laying, and consequently is valuable as a breeder.

Sell all weak, late-hatched or undeveloped pullets. Keep all mature, vigorous, healthy pullets. Get rid of all hens that are weak, sick, or overly fat, the early molters, those with shrunken scaly combs, those with sunken, dull, listless eyes, those with thick pelvic bones, small abdomens, hard, fat, egg-sacks, small, dry, yellow vents, and those with prominent, yellow shanks, beaks or ear-lobes. Save hens that are healthy, strong, active, late molters, those with waxy, full red combs, prominent, bright eyes, thin pelvic bones, large abdomens, soft, flexible egg-sacks, large expanded, moist vents, and those with pale shanks, beaks and ear-lobes.

Cull all aged male birds that lack constitutional vigor and vitality. Cull all aged hens that do not show exceptional qualities as egg producers.

Fowls Probably Poisoned.

About ten of our 600 White Leghorns, now about five months old, have something wrong with them so they cannot walk. One leg sticks out in front and the other to the rear. When they get so they can keep both legs where they should be, their toes turn under and they seem unable to straighten them out. They eat well and seem to be all right except that they cannot move about. What is the matter with them, and what can we do to cure them?—J. A. A., Utah.

The symptoms indicate paralysis and this is usually caused by some form of poisoning. If the birds are badly poisoned, prostration comes quickly and they lie around in relaxed condition with the head and neck curled near the breast. The combs will turn black. In some respects the symptoms are similar to those of limberneck. Partial paralysis usually comes from slight poisoning.

Give the affected fowls a teaspoon of castor oil each. Following this treatment with sulfid of strychnine in doses of one-fifth grain to each bird every five hours. It may be impractical to treat a large number with castor oil, in which case you can give them epsom salts at the rate of a small level teaspoon to each bird in a bran mash. If they have been starved sufficiently so they will consume the mash you can follow this treatment with the strychnine, also given in the mash.

For a positive diagnosis of the trouble, crate two or three of the birds that are sick and send them to the Veterinary Department of the Colorado Agricultural College at Fort Collins.—P. C. J.

Turkeys Have Gorged Crops.

Two of our half grown turkeys seem perfectly well, but their crops are unusually large and hang down below the breast bone. They seem to have water in them. Can you tell me what is wrong and what to do for them. They have unlimited range and plenty of alfalfa.—J. E. B., Ouray county, Colo.

These turkeys probably have been eating some indigestible substance, such as feathers or similar material, which will not pass through the digestive system. Try giving each one teaspoon of sweet oil and then with the fingers work the contents of the crop up through the gullet and out of the mouth, holding the bird with its head down during the process.—P. C. J.

Egg-Production in General-Purpose Breeds.

The best mash for stimulating egg production in hens of the general-purpose breeds, such as the Plymouth Rocks and Wyandottes, according to experiments carried on by the United States Department of Agriculture, is one that is not so rich in corn meal and meat scrap as those frequently fed to Leghorns. On the department's poultry farm at Beltsville, Md., the best results with general-purpose hens were obtained with a mash containing only 18 per cent of meat scrap with considerable ground oats and wheat bran. The entire mixture is made up in the proportion of 3 parts of corn meal, 1 part of bran, 1½ parts of meat scrap, 1 part of middlings, 2 parts of ground oats, and 5 per cent of linseed meal. As a result of using this feed the hens produced a good yield of eggs, but did not become overfat and were in good breeding condition.

Leghorns and other breeds of the same type can use a heavier and more stimulating ration without endangering their physical condition and the hatching quality of the eggs. The mash that has been giving the best results with the department's Leghorn flock is made up of 4 parts of bran, 4 parts middlings, 66 parts corn meal, and 26 parts of meat scrap. Barred Plymouth Rock pullets fed on this heavy mash laid a few more eggs than pullets of the same breed fed on the first mash, but they suffered in health and their eggs were lower in fertility.

Among the vegetable proteins fed to poultry, the department has found that gluten meal seems to be the best, although cotton seed and peanut meal are very satisfactory if supplemented with animal protein in the form of meat scrap, tankage, fish meal, or milk, and with mineral salts. For good results the vegetable proteins should not exceed 10 per cent of the total mash. Tests have shown that a good grade of fish meal is practically as good as meat scrap or high-grade tankage.

Improved Method of Packing Eggs.

A saving of from 50 to 75 per cent in damage to eggs in transit amounts to a very large sum in a season, particularly if several hundred cars are involved. When this saving can be created at an additional expense of only a few cents to the case, entirely by proper packing, the egg producers of the country should immediately be interested. Damage to egg shipments is preventable to such a large extent under the best modern conditions that experiment stations, the great shipping companies everywhere and the farmers generally are co-operating with the railroads in a nation-wide effort to shut off the losses which have been a source of so much expense and irritation in the past.

The American Railway Association through its freight claim prevention department believes that the answer to the egg breakage problem has been found in the excelsior pad. This is not a trade name. The pad, as its name indicates, is made of ordinary excelsior but in such a way that it is very nearly perfect in preventing damage as contrasted with loose excelsior. Egg damage and subsequent claims for losses have grown to such proportions that specialists were assigned to provide a remedy. It was determined that the chief cause of breakage of eggs in transit was the loose pack which allowed the fillers to shift and shuffle about in the case, then bending or breaking the tips of the fillers and permitting the eggs to come in contact with the sides and ends of the case. Experiments have shown that six pads used in each case, three in each of the two compartments, produced enough pressure to hold the eggs firmly in place and relieve the pressure on the filler tips. One produce company in Michigan reports that its damage claims in 1920, while loose excelsior was used for packing, amounted to $600, while in 1921, when the pads were used, these claims were reduced to $23.40.

The excelsior pads cost the shipper about 1 cent a piece or six cents to the case. Produce companies in all parts of the country are reporting a saving from 25 to 80 and even 100 per cent when the six excelsior pads are used, one at the bottom, one at the top and one under the top layer in each side of the case. Some shippers report handling from one to two hundred cars of eggs without any damage whatever under this system of packing.

To insure against the breakage of eggs in transit the American Express Company and the American Railway Association recommend these simple rules:

1. Use only new standard fillers. A filler is strong enough for one trip only, hence there is no such thing as a "good" second-hand filler. The use of second-hand fillers is prohibited by both the freight and express regulations.

2. Use six 4-ounce excelsior pads to the case, one on top, one on bottom and one under top layer of each side. Best results are obtained by not inserting a flat where a pad is used. Do not use loose excelsior in cushioning eggs. More damage occurs in eggs packed with loose excelsior than with any other method of packing. Six pads give much greater protection than four pads, because the latter do not hold fillers firmly in place.

3. Use only standard cases (preferably new), making sure center board is exactly in center, and see that cases are carefully nailed in accordance with the requirements.

4. If eggs are shipped in carloads, baled hay, straw or excelsior should be used as buffing to prevent shifting of cases in transit. If dimensions of car permit, the empty space should be equally divided between ends and center of car, and the buffing material rammed in as tight as possible, just as taken from the machine pressed bale, and such spaces should be completely filled. This cannot be done satisfactorily after the loading has been finished; the buffing should be applied as the loading progresses.

The railway and express authorities say that the extensive adoption of these methods by farmers and carlot shippers throughout the country is reflected in a reduction of about 50 per cent in claims filed this year, compared with last year, when they exceeded a million dollars.

Three Forms of Roup.

My young pullets sit around with their eyes closed and some of them gap for breath and seem to be blind. They would starve to death if I did not feed them. I have dipped them but it did no good. Only one has died so far and I am trying to save the rest. There does not seem to be any signs of roup.—Mrs. G. C. W., Otero County, Colo.

There are three forms of roup common in Colorado, the diphtheritic, which affects the throat and mouth, usually causing cankers; the nasal, which affects the air passages; and the ocular, affecting the eyes. Each form of roup seems to start with a cold and with discharges from the nostrils. Mucous often clogs the air passages and causes the fowl to gasp for breath. With the ocular roup the eyes swell so the birds cannot see. I have found many fowls affected with this form of roup in the past few weeks. The symptims were quite similar to those described.

If only a few are affected and they are not exceptionally valuable, it usually does not pay to treat them. The eyes can be washed with a boric acid solution and the eyelids treated with iodine. The treatment must be repeated frequently. Put enough potassium permanganate in the drinking water to turn it a wine color. All sick birds should be isolated and treated entirely away from the rest of the flock. They should not be placed with healthy fowls for several weeks after all sysptoms have disappeared. The fowls should have a well ventilated coop, free from draughts. To get a positive diagnosis, send one of the affected birds to the veterinary division of the Colorado Agricultural College, Fort Collins, Colo.—P. C. Jamieson, Fort Collins, Colo.

Controlling Lice on Poultry.

Lice-infested fowls cannot be profitable producers; in fact, many of the ailments to which fowls are subject are much more serious in flocks where no effort is made to destroy and control lice and mites. The four species of lice most commonly found on chickens are the head louse, the body louse, the shaft louse and the fluff louse. All are controlled alike by dipping or dusting.

In the control of lice sodium fluoride is nearly 100 per cent efficient. It is easily the best louse killer to be obtained. It can usually be secured from the local drug store, and comes in the form of a white powder. It may be applied in two forms—as a dust or as a dip. Where applied as a dust, small pinches of it should be worked into the feathers on the head, neck, back, breast, under the wings and below the vent. During the warm weather it is very much quicker and much more effective to dip the fowls. The solution is colorless and does not stain the feathers. Where the dipping is done on a warm, quiet, sunny day the birds dry out quickly and no ill effects follow.

The following is quoted from Farmers Bulletin 801 of the United States Department of Agriculture:

"In using the dipping method all that is necessary is a supply of tepid water and a tub. If two persons are to dip at the same time it is advisable to use a large tub. The water should be measured into the tub and three-fourths to one ounce of commercial or two-thirds of an ounce of chemically pure sodium fluoride added to each gallon of water. It is readily dissolved by stirring. The tub should be filled to within six or eight inches of the top, and as the amount of solution is lowered through dipping numbers of fowls, water with the proper proportion of sodium fluoride dissolved should be added from time to time.

"In dipping the fowls it is best to hold the wings over the back with the left hand and quickly submerge the fowl in the solution, leaving the head out, while the feathers are thoroughly ruffled with the other hand so as to allow the solution to penetrate to the skin on different parts of the bird. The head is then ducked once or twice, the bird is lifted out of the bath and allowed to drain a few seconds, and is then released.

"It is not necessary to keep the fowl under the water longer than twenty to thirty seconds, and the head only an instant."

Radio Club on Tour.

(Continued from Page 17.)

the Boulder county party, which was in charge of Josephine Lee Ferguson, county club leader, proceeded to the State Experimental farm, where the test plots were inspected and explained. This was followed by inspection of the dairy barns, the hog section and the pastures in which the visitors saw the breeding herds of both dairy and beef stock, as well as sheep. Other divisions inspected included the military, where the young people saw French 75s and other ordnance material, the poultry section, where the incubator house, breeding pens and model poultry houses proved interesting and instructive, and the women's building, the museum, machine shops and other points of interest. After lunch there was a short program of addresses and club songs, the speakers including President Charles A. Lory,

The visitors brought their lunch and the College provided lemonade and coffee, while the Fort Collins Chamber of Commerce furnished free ice cream. Director C. P. Gillette of the Experiment Station; G. B. Irwin, president of the Fort Collins Chamber of Commerce; Durward Pilcher, a Boulder co[illegible] member; Miss Maude Sherida[illegible] club leader, and Dean S. Arthur Johnson of the Agricultural College

Market Outlook for Farm and Ranch Products.

(Continued from Page 5.)

and in addition lamb feeders are competing with packers in order to obtain even a small supply for feed lots. As a result of these influences prices advanced sharply last week to a top of $14 at Chicago, the highest since May.

Feeder demand is keen but is limited by the small available supply. Prices are extraordinarily high, but unless the western range supply expands the number put into feed lots will be small enough to make the feeding operation fairly safe.

Wool Market Displays Strength.

The wool market is showing a healthy tone and activity is more marked than a few weeks ago, as manufacturers have resumed buying on a broader scale. Higher prices on woolen goods are rather freely predicted.

North America Has Big Wheat Surplus.

The revised estimate upon the wheat crop of the United States points to a surplus for export of approximately 230,000,000 bushels, provided that domestic consumption is equal to the average of the last few years. If consumption is no larger than last year, however, the exportable surplus will be about 265,000,000 bushels.

The official estimate for September on the Canadian crop was 389,000,000 bushels, practically equal to the record crop produced in 1915. Assuming average domestic consumption in Canada, the exportable surplus will be approximately 300,000,000 bushels.

The total surplus from both countries based on the foregoing data is 530,000,000 bushels. The needs of importing countries are variously estimated at from 650,000,000 bushels to 725,000,000 bushels. Besides the supply in North Amercia, both Argentina and Australia can furnish some wheat to importers in the last half of the crop year. Present prospects in both countries point to at least average yields which means a combined surplus of 150,000,000 bushels at least and reliable estimates are running considerably higher. In addition, small amounts are expected to come forward from the Balkans and possibly from India before the end of the crop year. The Indian government has estimated the exportable surplus at 65,000,000 bushels.

Unless there is a crop calamity in the Southern Hemisphere in the next two or three months, there is plenty of wheat in sight to supply the needs of importers. Wheat statistics, therefore, are less bullish than they have been for three years, as there is a prospect that the world will wind up the present crop year with more wheat than at the end of the preceding year.

War Clouds Advance Wheat Market.

The wheat market continued to drag last week as the demand from flour mills and exporters has been inadequate to the offerings. Prices declined temporarily to the lowest level of the season and practically to the low point reached in November, 1921. The disturbance in the Near East finally caused a sharp recovery, although it is not clear to what exente it increased export sales.

Settlement of the rail strike is expected to augment the movement to primary markets as country elevators for several weeks have been reported to be full, but unable to ship out because of the lack of cars. It should likewise facilitate the movement of wheat to export points and milling centers.

Rumors are prevalent of official aid to enable farmers to withhold part of their crop from the market and possibly to assist foreigners in making purchases in the United States. Unless some new influences such as the war threat remains in the market, a dragging tendency is likely to continue, although prices are not expected to go much lower than they now are.

Coarse Grain Markets Unsettled.

Coarse grain markets have been unsettled recently, the trend in the wheat market being the main influence. It is generally believed that the corn crop will fall below the government estimate and demand remains broad, but producers are selling freely and primary receipts have increased again. A pronounced advance in values rarely occurs on the eve of the harvest of the crop. Receipts of oats increased last week, but there is as yet nothing like the usual post-harvest movement. Demand from the East has improved materially, and prices have responded [illegible].

Cash Grain Markets.

The range of cash grain prices follows:

Kansas City—Wheat, No. 3 red, $1.03@1.12; No. 2 hard, 98c@$1.12; No. 3, 96c@$1.10.

Corn—No. 2 mixed, 59c; No. 2 yellow, 58@62½c; No. 2 white, 57@59c.

Oats—No. 4 white, 37½c.

Kafir, $1.90.

Light Receipts in Hay Market.

Arrivals of hay at distributing markets and country loadings in the surplus sections both are comparatively light. Prices are firm in a few cities, but most points report weakness.

Kansas City—Prairie upland No. 1, $10.50@11.50; No. 2, $9@10; alfalfa, choice $20@21; No. 1, $17.50@19.50; standard, $15@17; No. 2, $12.50@14.50; No. 1 timothy, $14@15; No. 2, $11@12; No. 1 light clover-mixed, $14@14.50; No. 1 clover-mixed, $12@13.50; straw, $6.50@7.50.

Egg Market Retains Advance.

Egg prices have retained nearly all the recent advance. Receipts of fresh eggs at the leading cities are running lighter than last year and slightly below the average for the corresponding season in the three preceding years. Demand is brisk and in addition to current receipts rather heavy withdrawals from cold storage are necessary.

Poultry prices are holding up as receipts are not running as much above the average for the corresponding season as they were two months ago. Indications are, however, that the crop to be marketed this fall and winter will be larger than during any recent year.

Kansas City: Eggs—First, 26c; seconds, 20c. Live poultry—Broilers, 20c; springs, 19c; heavy hens, 21c; light hens, 15c; roosters, 10c; ducks, 12c; geese, 8c.

Denver: Eggs—$5.50@7 a case. Live poultry—Hens, 15@29c; springs, 22c; broilers, 22c; roosters, 7c; turkeys, 27c.

Butter Market Retains Advance.

Although a weaker tone was noticeable in the butter market last week, prices at eastern points advanced slightly and the decline at Chicago was negligible. Rains and cooler weather have improved the prospects for autumn production, but it is improbable that the make will be sufficient to supply the consumptive demand so that steady inroads must be made into cold storage holdings from this time on. Fancy butter has been scarce as most of the recent receipts were made during the hot weather period. The butter situation is comparatively strong, although advances from this level may be rather slow.

Prices for fresh 92-score creamery butter on September 18 were: Chicago, 38½c.

Fruit and Vegetables.

Potato markets were uneven last week. Prices declined on eastern stock and advanced on northern and western potatoes. Shipments are running smaller than a few weeks ago, but are up to normal for this season of the year. The September forecast shows a slightly smaller crop than a month ago, but the combined crop of white and sweet potatoes is the largest ever produced. Northern round whites are quoted at $1.40 to $1.75 per 100 pounds in midwestern cities.

The apple market is holding at about the same level as in the two preceding weeks, with summer apples quoted at a range of 75 cents to $1.25 a bushel on midwestern markets, and Grimes Golden and Jonathans bringing $3.25 to $4 a barrel. The September forecast placed the commercial crop at 32,583,000 barrels, compared with 21,200,000 barrels last year and an average of 26,800,000 barrels in the five years 1916 to 1920. Receipts continue to reflect the big crop, the carlot movement for the entire United States in the week ending September 9 being 1,768 cars, compared with 1,215 cars last year, 1,068 cars two years ago, and 913 cars three years ago.

Onion markets have been uneven with prices firm at some points and weak at others. Midwestern yellows are quoted at $1.50 to $2 per 100 pounds in leading markets.

The peach crop estimate was 55,615,000 pounds, or about the same as a month ago. Last year's crop was 32,700,000 pounds, and the average in the five preceding years was 43,600,000 pounds. This year's crop is the largest on record with the exception of 1915.

Record Exhibits at State Fair.

As we close the last form for this issue of Western Farm Life, the gates are opening at the State Fair Grounds in Pueblo for the largest and most comprehensive exhibit of the agricultural and industrial resources of the state ever shown. In every department increases in number and quality of exhibits are to be seen. A year ago 468 animals made up the hog show, while this year the number is close to 600 without including the showing made by the boys' and girls' clubs. There are 248 pens in the swine pavilion and these are filled to overflowing and many of the entries are housed outside. The total exhibits are close to 700. Ten herds from outside the state are showing, whereas there were but two last year. Great increases are found in the sheep department also, it being the largest showing of breeding sheep ever made.

The cattle industry is one of the large interests in Colorado and it is to be expected that this department of the livestock show should be a large one. A step forward has been made in that there are two separate divisions for cattle, the beef presided over by L. C. Grant, the awards being made by H. J. Gramlich of Lincoln, Neb., and the dairy, superintendent Fred C. Waddell of Pueblo, and judge, W. H. Standish, Lyons, Ohio. Mr. Grant reports an increase of about a fourth in the beef cattle division, and Mr. Waddell states that there are about twice as many dairy cattle showing. There also is a large showing of dairy products and devices.

A new brick building adds interest and value to the large poultry show which took on extensive proportions last year and this year is even larger. C. A. Spickerman of Colorado Springs is superintendent and the awards are being made by James A. Tucker of Royal Oaks, Mich.

The horticultural building is an exposition in itself. There are forty-six varieties of apples grown in Colorado, says T. F. Simpson of Manzanola, superintendent, and it is no small task to place the awards on all the classes. High-class judges of fruit are scarce, but the State Fair officials have been fortunate in getting R. J. Barnett of Manhattan, Kan., to judge the mammoth exhibit of fruit on display.

The county agricultural displays, of which there are twenty-seven, more than six times as many as last year, are being judged by Professor Alvin Kezer of Colorado State Agricultural College. The expenses of making these displays have been met by the county commissioners of the various counties. They are judged on the basis of a scale of points and the prizes range from $225 for first down to $20 for eleventh. While the rules are rigid as to the general arrangement, size of banners, and amount of space used, great latitude has been allowed for display of engenuity in the line of decoration and embellishment and these displays are outstanding features of the agricultural department, the superintendent of which is P. M. Kean.

In our issue of October 15 will appear a complete story of the fair with a list of the awards.

Recent Range of Livestock Prices at Our Principal Markets.

Cattle—	Denver.	Kansas City	Omaha.
Choice and prime heavy steers (1100 lb. up).	$.....	$9.75@10.75	$10.00@10.75
Good heavy steers	.....	8.30@ 9.90	8.50@10.00
Medium heavy steers	6.50@ 7.85	7.00@ 8.50	7.25@ 8.50
Common heavy steers	5.00@ 6.75	5.25@ 7.15	5.25@ 7.25
Good light steers	.....	8.00@ 9.75	8.25@10.25
Medium light steers	6.25@ 7.85	6.60@ 8.15	7.00@ 8.25
Common light steers	4.00@ 6.50	4.50@ 6.75	4.75@ 7.25
Common to choice butcher heifers	4.00@ 6.25	4.50@ 9.25	4.50@ 9.00
Common to choice butcher cows	3.25@ 5.50	3.40@ 6.50	3.50@ 7.25
Bologna and beef bulls	2.25@ 3.25	3.15@ 5.25	3.00@ 6.00
Canners and cutters, cows and heifers	1.50@ 2.50	2.00@ 3.50	2.00@ 3.50
Canner Steers	2.50@ 3.50	3.00@ 3.75	2.50@ 4.00
Common to choice feeders (1000 lb. up)	5.50@ 7.50	5.60@ 8.35	6.00@ 8.35
Common to choice feeders (750-1,000 lb.)	5.00@ 7.25	5.50@ 8.15	5.75@ 8.00
Common to choice stocker steers	4.00@ 7.00	4.35@ 7.90	5.00@ 7.75
Common to choice stocker cows and heifers	3.00@ 5.50	3.00@ 6.00	3.25@ 5.25
Hogs—			
Top of Market	$ 9.60	$ 9.55	$ 9.35
Bulk of Sales	9.00@ 9.40	8.50@ 9.45	6.75@ 9.25
Heavy (250 lb. up)	.....	8.00@ 8.30	7.75@ 9.20
Medium (200—250 lbs.)	9.00@ 9.50	8.15@ 9.50	8.35@ 9.35
Light (150—200 lb.)	9.25@ 9.60	7.90@ 9.55	8.75@ 9.35
Smooth packing sows (250 lb. up)	6.50@ 7.00	6.85@ 7.75	6.60@ 8.20
Medium to choice pigs (130 lb. down)	7.50@ 8.00	.....	.....
Stock pigs	.....	8.40@ 9.25	7.00@ 8.50
Sheep and Lambs—			
Medium and prime lambs 84 lb. down)	$10.75@13.50	$11.00@13.85	$11.75@14.00
Medium to choice ewes	3.50@ 5.50	4.00@ 6.80	3.50@ 6.00
Feeder lambs	10.50@12.75	11.00@13.00	10.50@13.25

Danger of Over-Production?

What's it all going to lead to? Will the agitation for more dairy cows be overdone? Can it be overdone?

Two eminent authorities now have come forward and answered the fear in some folks' minds that we might have a dairy cow stampede.

They are Hoard's Dairyman, and Col. W. E. Skinner, general manager of the National Dairy Exposition to be held at the Twin Cities of St. Paul and Minneapolis, October 7-14.

Hoard's is the paper founded by the late Gov. W. D. Hoard of Wisconsin, a pioneer in dairy development. It says editorially:

"The 'Minnesota Leader' expresses great concern regarding the effort to get the farmers of the Northwest to keep more dairy cows. It is afraid of a dairy cow stampede. We consider this paper is wasting its time sounding the alarm against the dairy cow to the Northwest. She never has stampeded any country and has never been overdone in any state.

"No greater argument can be made for the dairy cow than to point to the sections where she is kept in large numbers and note how much better the farmers are passing through the period of depression and readjustment than they are in those sections following some other form of agriculture. The coming of the dairy cow in Minnesota was a blessing and the southern part of the state which has been in dairying longer than any other section is still enjoying greater prosperity than any other portion.

"Since the beginning of the dairy industry a few timid souls have been fearful that dairying would be overdone. They have pointed out that if every farmer kept dairy cows, dairy products would become so cheap it would become unprofitable to milk cows. These men are undobutedly right in their contention, but where they fail in their reasoning is that not every farmer will accept a dairy cow. We are of the opinion that the 'Minesota Leader' has counseled with fear and not with facts."

Colonel Skinner was interviewed by a newspaper reporter at his office in St. Paul on this subject. He said:

"Notwithstanding the growth of cow test associations, the spread of boy and girl calf clubs and all our propaganda, we failed to overtake the increasing market for dairy products. Education in health and nutrition, the availability of clean, palatable dairy foods in almost every public eating place and the advertising campaigns of such producers as the milkmen and the ice cream manufacturers and the steady growth in population—all these operate to keep the demand well ahead of the supply. Over-production is a possibility so remote that no one need worry about it."

Increase in the consumption of butter has followed increased production this year as well as in the past, according to Gilbert Gusler, an authority on marketing problems. Charting the progress of the butter market over four years, he points to the effect that receipts of butter in 1922 at the five principal markets of New York, Boston, Philadelphia and San Francisco have held consistently above the average of the three preceding years. Cold storage stocks, at the beginning of 1922, were above the three-year average for that time of the year, "but so broad was the demand that cold storage holdings were brought below the three-year average during this spring."—National Dairy Association.

Auto Busses and Education.

There are 12,000 schools in the United States now using busses to transport their pupils. The day of the little red school house is numbered. Consolidated or community schools are taking their place because of the increased educational facilities and standard permitted by pooling of appropriations. Better buildings, better equipment, better instructions are the immediate result. But with consolidation comes the factor of distance, so busses were the answer and this form of transportation is making good for better education.—From Federal Traffic News.

Young pigs should have access to a ration of corn, shorts and tankage in a self-feeder.

Dairying and Hog Raising

All letters regarding commercial and technical features of dairy farming and hog production promptly answered. Address all communications to Dairy Department, Western Farm Life, Denver, Colorado.

Water is a necessity for hogs and they should be supplied with as much as they need. It is the cheapest ingredient that enters into the production of pork.

Keep your pens, troughs and feeding floors clean and scatter fresh air-slacked lime around them. It is not only beneficial for preventing disease and killing germs, but a little of the mineral that goes into the feed or is picked up with the feed is a bone builder for the animal.

An American laboratory, according to the Scientific American, has produced a substitute milk from the common peanut which turns sour and curdles, produces buttermilk when churned, and may be made into cheese. Similar results have been obtained from the coconut and the soya bean. Fortunately America has no need for the coconut cow and the soy bean. This is primarily an agricultural country and the dairy farmers can produce enough milk to go around if consumers will stick to the real cow.

Keep Runts in Separate Pen.

It would be mighty fine if all our pigs could be farrowed the same day, and could be developed together with no little runty ones that had been pushed to the back teat and otherwise stunted, says a writer in the Hampshire advocate, but this is an almost impossible condition. The best we can do is to minimize the undesirable features by having one pen for the big husky pigs which are especially growthy, another for the medium-sized ones and a pen for the runts. Many breeders say that the most profitable way to dispose of the runt pig is to kill it. That may be well and good, but it should be done as soon as the pig shows for sure that it is developing as a runt. On the average farm this is not what is done. The runt is allowed to run with the rest of the bunch until he either dies or comes out of the kinks of his own accord. It is a bad practice from a number of viewpoints. It is bad advertising for your herd in the eyes of the man who calls to look at your hogs, for a runt pig is always in evidence.

There is no surer source of infection to the herd than the runt pig. Disease will strike him first, for he naturally does not have the vitality or constitution to withstand it, and he then becomes a source of infection for the rest of the herd. Culling of the runt pigs into one pen will reduce to a minimum the danger of infecting the herd with the various contagious diseases, but it is a good idea to have the runt pen a little distance from the other hogs.

It will also pay as a rule to give the runts special feeds and special attention. Many runts owe their condition entirely to the fact that they have been crowded out, and a short period of good feeding with others of their own size and strength, will put them on their feet. Then, too, if you have them together in one place, it is easier to handle them in treating them for worms. It is pretty sure that the runty pig is wormy, so keep continually after these parasites. Don't be afraid to use worm medicine. Use it just about twice as often as you think it is necessary. Keep the lots and houses in sanitary condition. Feed an abundance of growing feed, and often you will find the curl will come into the runty pig's tail; he will lose his pot belly, his hair will no longer stand on end, and within a short time he can be put out with the rest of the good, thrifty pigs.

Arkansas Valley Cow Testing Report.

A profit of 95 cents over feed cost for each 100 pounds of milk produced was the average of the 224 cows tested in the Arkansas Valley Cow Testing Association for the month of August. There were twenty-three herds tested, among which the Green Mountain Dairy ranks first in production with an average of 922 pounds of milk and 30.9 pounds of butterfat for its nineteen cows. Harry Heath came second in butterfat, E. O. Bell third, V. Bollinger fourth, and Model Dairy Farm fifth. The Model Dairy had the highest producing cow with a production of 1,506 pounds of milk for the month, and 58.7 pounds of butterfat. The herd returning the greatest profit over cost of feed was that of Mr. Bell with an average profit to the cow of $10.55. The average cost of roughage for the month was $2.24, and for grain $1.74. The market value of the milk was $1.60 a hundred pounds.

Max Grady, the tester, reports that seven herds were tested for tuberculosis during the month by Dr. Stout, in charge of the Federal Government accredited herd work. He found nineteen reactors which were shipped to Denver for slaughter, accompanied by Coy Barnard. Mr. Barnard reported upon his return that more or less extensive lesions of tuberculosis were found in all the animals. Nine were so badly infected that they were condemned for food. These were undoubtedly spreaders of the disease and actively dangerous to other animals and to consumers of the milk. These findings have thoroughly aroused the dairymen of the Valley to the necessity of eradicating this dread disease. A large number of applications for tests have been made and the dairymen are working for a larger appropriation by the state in order that the campaign of tuberculosis eradication may be carried on more aggressively.

Feeding Hogs on Alfalfa.

Alfalfa probably has no equal as a pasture for hogs, but it should not be regarded as a balanced ration, either for growing or fattening. A small grain allowance is essential for the best and most economical results. Alfalfa supplies protein and mineral matter, but grain, such as corn, barley or oats, is necessary to properly balance it. It is even advisable to feed a small allowance of tankage to hogs running on alfalfa to supply the necessary mineral protein, say the hog specialists of the Colorado Experiment Station. The following grain mixture has been found to be a good supplement to alfalfa pasture for both growing and fattening hogs: Corn, 45 pounds; oats, 50 pounds; tankage, 5 pounds.

For fattening hogs on alfalfa pasture increase the corn and decrease the oats, thus cutting down the bulk of the ration and adding more fattening grain. Feed aged sows of the grain mixture 1 per cent of their weight; growing shoats, 2 per cent, and pigs, 3 per cent of their live weight.

An acre of irrigated alfalfa should carry around twenty head of shoats during the growing season, if they are fed grain at the rate of 1 or 2 per cent of their live weight. Alfalfa on un-irrigated will not carry more than a third as many. If alfalfa is grazed too closely at any time during the season, and particularly on un-irrigated land, the stand may be seriously injured.

Big Producers Eat More.

Cows that produce milk and butterfat in large quantities have keen appetites and roomy paunches, but they bring in higher incomes over feed cost than the scanty producers, regardless of breed, age, weight, date of freshening, and geographical location. This is one of the important points brought out in Bulletin 1069, "Relation of Production to Income from Dairy Cows," by J. C. McDowell, just published by the United States Department of Agriculture.

The facts in the bulletin are based on a study of information supplied by ninety-six cow-testing associations in various parts of the country. Because of better feeding, better breeding, and better care, cows owned by association members are much better than the general run of cows. The estimated production per head of all the dairy cows in the United States is approximately 4,000 pounds of milk and 160 pounds of butterfat a year. The association cows are about 50 per cent better, producing an average of 6,077 pounds of milk and 248 pounds of butterfat.

According to figures based on 18,014 yearly individual cow records, as butterfat production increased from 100 to 400 pounds there was a regular increase of about $16 in income over feed cost per cow for every fifty pounds of increase in average production of butterfat. As the yield of butterfat increased from 109 pounds to 396 pounds, the returns above the dollar expended for feed increased from 35 cents to $1.52.

The cows having an average milk production of 3,250 pounds showed an av-

Feed Your Hogs MERRY WAR LYE

HOGS eat better when a little MERRY WAR LYE is mixed with their feed—and you know it takes appetite to make meat and fat. MERRY WAR LYE also tends to reduce acidity of feed—helps build up the resistance of hogs to certain diseases and helps tone them up. Thin, scrawny, sickly hogs usually improve quickly when fed MERRY WAR POWDERED LYE—even healthy hogs do better. Costs little to feed—120 feeds in every can—pays for itself many times over.

Directions For Feeding

Thoroughly dissolve a tablespoonful of MERRY WAR POWDERED LYE in a little water and mix well with feed for ten hogs or thoroughly dissolve HALF a can in water and mix with a barrel of feed. Stir well and feed night and morning. If on dry rations thoroughly dissolve HALF a can of MERRY WAR LYE in each barrel of drinking water. Follow directions carefully.

For years hog raisers have been feeding MERRY WAR LYE—they know what it will do. Profit by their experience—feed your hogs MERRY WAR LYE.

Look For The Picture of The Hog on The Label

It Is The Sign of Safety You will find it only on "MERRY WAR"—safe Lye for hogs.

Sold by Grocers, Druggists and Feed Dealers

E. MYERS LYE CO., *Established 1888.* St. Louis, Mo.

MERRY WAR LYE

The Tester Knows

The only sure and accurate way to determine just how close your separator is skimming is by means of the Babcock Test, and the most accurate operators of the Babcock Test are the cow testers employed by the various cow testing associations. The following statements from cow testers are interesting:

—"The closest skimming of milk I have in this association is done with a De Laval. Of the 29 separators in this association 16 are De Lavals."—Tester for the second largest association in Minnesota.

—"De Laval Separators and Milkers are to my mind superior to any other makes. The separator is the most efficient skimmer of milk and its durability is lasting. In this community we have practically all De Laval Separators."—Tester for a Pennsylvania association.

A De Laval soon pays for itself and is sold on such easy terms that you can use it while it is doing so.

The De Laval Separator Co.

NEW YORK 165 Broadway — CHICAGO 29 E. Madison St.

Sooner or later you will use a

De Laval

Cream Separator and Milker

$7.50 After 30 Days Free Trial

The Belgian Melotte Separator—with the wonderful Self-Balancing Bowl. No other like it.

30 days' free trial—then, if satisfied, only $7.50 and a few easy payments—AND—the wonderful Belgian Melotte Separator is YOURS.

No Money Down!

Catalog tells all—*write.*

Caution! U. S. Bulletin 201 shows that vibration of the bowl causes cream waste! The Melotte bowl is *self-balancing.* Positively cannot get out of balance therefore cannot vibrate. Can't remix cream with milk. *The Melotte has won 24 Grand and International Prizes.*

Catalog FREE

Write for new Melotte catalog containing full description of this wonderful cream separator and the story of M. Jules Melotte, its inventor. Don't buy any separator until you have found out all you can about the Melotte and details of our 15-year guarantee which is infinitely stronger than any separator guarantee. Write TODAY.

Runs so easily, bowl spins 25 minutes after you stop cranking unless you apply brake. Bowl chamber is *porcelain lined.*

The Melotte Separator, *H. B. Babson, U.S. Mgr.*
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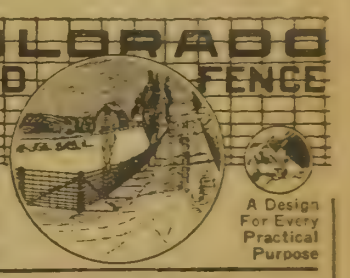
2445 Prince Ave., Berkeley, Calif.

COLORADO FIELD FENCE



Maximum Protection At Minimum Cost

A Design For Every Practical Purpose

Your dealer can supply this scientifically built Fence. Write us for name of dealer in your vicinity.

The Colorado Fuel & Iron Co.

Dept. WF. Denver, Colo.

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100% PROTECTION FOR LIFE from *one* vaccination with Cutter's Liquid or Solid Blackleg Aggressin. Absolutely safe. Cutter's Solid Aggressin Injecters work just like Blackleg Pill Injectors. If Cutter's Aggressin is unobtainable locally, write

The Cutter Laboratory

"*The Laboratory that Knows How*"

Berkeley (U.S. License) California

N.B.—Old Style Powder and Pill Vaccines still made for those who prefer them.

BARREN COWS, are the results of CONTAGIOUS ABORTION

Prevent this by using ABORNO. Easily administered by hypodermic syringe. Kills abortion germs quickly without harming cow. Write for booklet with letters from users and full details of Money-Back Guarantee.

ABORNO LABORATORY
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Kodak Film Developed 10c
Prints 4c to 6c.
MAIL IN YOUR FILM.
ONE DAY SERVICE
NO DELAY.
EASTMAN KODAKS, ALBUMS, FILM, ETC.
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Established 1905.

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Farmers' and Stockmens' Exchange

Advertisements will be inserted in this department for 7c per word; four or more consecutive insertions, 5c a word each insertion. Remittances can be made by postoffice money order or personal check. Every figure and initial counts as one word. Guaranteed circulation 55,000 copies each issue. Send us a trial advertisement. Write for proof showing how these columns pay advertisers.

HELP WANTED

MEN — WOMEN WANTED — GOVERNMENT clerks and carriers, railway mail clerks, $1,600—$2,300. List positions free. Write Mokane, Dept. B-11, Denver, Colo.

EARN $110 TO $250 MONTHLY, EXPENSES paid, as Railway Traffic Inspector. Position guaranteed after three months' spare time study or money refunded. Excellent opportunities. Write for free Booklet G-142. Stand. Business Training Inst., Buffalo, N. Y.

AMBITIOUS MEN—WRITE TODAY FOR attractive proposition, selling subscriptions to America's most popular automobile and sportsman's magazines. Quick sales. Big profits. Pleasant work. Digest Publishing Co., 9659 Butler Bldg., Cincinnati, Ohio.

$50.00 WEEKLY—MEN, WOMEN, TAKE ORders for American Guaranteed Hosiery. All styles, colors for men, women, children. Silk hose guaranteed against runners. Experience unnecessary. Write today for territory and samples. American Hosiery Mills, Dayton, Ohio.

HUNDREDS U. S. GOVERNMENT POSITIONS continually open to men-women over 17; $92—$190 month. Quick, steady raise; paid vacation; no strikes; steady work; short hours. Common education sufficient, "pull" unnecessary. Write immediately for list positions. Franklin Institute, Dept. J 123, Rochester, N. Y.

FOLLOW THE DOLLARS—$50 TO $100 PER week, the money yours; something new, not an old, worn-out proposition; field uncouched; experience unnecessary; takes everybody by storm; money rolls in; show 50, sell 40; demonstrated in one minute; sells on demonstration; the new Inkless Fountain Pen, the twentieth century wonder; never leaks or spills; with this pen no more use for the ink bottle; sample pen 50c; this proposition is 18 karat; money back if not as represented; agent's profit 200 per cent; exclusive territory; send for agency today. Inkless Fountain Pen Co., 1522 Eighth st., Des Moines, Ia.

FARMS AND RANCHES

WANTED—TO HEAR FROM OWNER OF GOOD ranch for sale. State cash price, full particulars. D. F. Bush, Minneapolis, Minn.

I WANT FARMS AND LAND FOR CASH BUYers; will deal with owners only. R. A. McNown, 334 Wilkinson Bldg., Omaha, Neb.

SELL YOUR PROPERTY QUICKLY FOR CASH, no matter where located. Particulars free. Real Estate Salesman Co., Dept. 11, Lincoln, Neb.

WANTED—TO HEAR FROM OWNER HAVING farm for sale; give particulars and lowest price. John J. Black, 33rd St., Chippewa Falls, Wis.

I HAVE CASH BUYERS FOR SALEABLE FARMS —Will deal with owners only. Give description and cash price. Morris M. Perkins, Dept. K, Columbia, Mo.

FARM FOR SALE—SEVENTY-THREE ACRES, irrigated, well improved, one and one-half miles from Mitchell, Neb., forty rod from Great Western Sugar Factory; excellent soil; under one of best irrigation ditches in Nebraska. Good feeding location. Price $15,000; will carry back half secured on farm. No trade considered. Write for particulars. Address R. E. Gifford, Mitchell, Neb.

IRRIGATED FARMS NEAR DENVER—GOING TO California and will close out at very low price and easy terms, several improved farms under good ditches, 20 to 30 miles of Denver and near railroads.

142 acres, one mile to depot, elevator and beet dump, rural route and milk route by the door. All under ditch, good water right; new six-room house; barn and outbuildings; half in alfalfa, 10 acres pasture with running water, no seepage. Refused $250 per acre two years ago, but price now $140 per acre; $2,500 cash, balance easy terms. Possession this fall.

80 acres irrigated, 5-room house, barn, good well; half mile to school, 3½ miles to town; all level, all in crop; no waste; rural route and milk route by the door. Cheap pasture land with running water across road, can be rented cheap. Fine dairy proposition. Price $125 per acre; $1,500 cash, balance easy terms. Possession this fall.

Also 160 acres, 320 acres, 107 acres, 105 acres, all irrigated, for sale cheap. Chas. O. Elwood, Owner, 615 Ideal Bldg., Denver, Colo.

LIVE STOCK

CATTLE.

RANGE BULLS—REGISTERED HEREFORDS and shorthorns. The Lowell Purebred Cattle Co., Union Stock Yards, Denver.

WHY PAY MORE? PUREBRED REGISTERED Holstein heifer calves, $50. Circulars free. Coulson's Holstein Farm, West Chester, Ohio.

FOR SALE, ELEVEN HEAD OF HIGH CLASS registered Jersey cows; good producers, some fresh, others freshening later, priced right for immediate sale. One milk bred registered Jersey bull, two and a half years old. May be seen at Highland Ranch, Littleton, Colo. Write Phillips Lowe & Reed, Managers, 734 Majestic Bldg., Denver.

HOGS.

HIGH CLASS REGISTERED DUROC BOARS BY Crimson Crest Sensation. Delbert Haskins, Peetz, Colo.

FOR SALE, POLAND CHINA BOARS, GILTS, bred sows; Agricultural College stock. O. L. Lee, Littleton, Colo. Mile east Broadway on Cedar.

BLUE HOGS—ACTUALLY BLUE IN COLOR; hardy, prolific, and profitable. Easy to feed, fat, ready for market at 6 months old. Blue Hog Breeding Co., Worthington, Mass.

SHEEP.

REGISTERED SHEEP, PRODUCING PERmanent wool, fine breeding qualities. Dr. Young, Hoff Schroeder, 1545 Welton st., Denver, Colo.

MILCH GOATS.

MILCH GOATS, HIGH GRADE, STOCK, young Does to freshen soon, also breeding Bucks. Rosedale Farm, R. D. 1, Lafayette, Colo.

PET STOCK

FOR SALE, REGISTERED COLLIE PUPS—Sable, Kenosburg, Colo.

POULTRY

LEGHORNS.

APRIL HATCHED BROWN LEGHORN COCKerels, 75c each. Richard Matoush, Julesburg, Colo.

SEVERAL VARIETIES.

NINETY BREEDS—POULTRY, EGGS, PIGEONS, dogs, baby chicks, parrots, ferrets, hares. Complete free folder. Bergey's Poultry Farm, Telford, Pa.

SEEDS

ALFALFA SEED, 95% PURE, $6 BUSHEL, sacks free, track Concordia. Geo. Bowman, Concordia, Kan.

KANRED SEED WHEAT, RECLEANED, $2.25 per bushel, sacked. Kanota oats, $1.25. Taylor & Sons, Chapman, Kan.

FOR SALE—CERTIFIED KANRED WHEAT; 25-acre field averaged over 50 bu. Price $2 per hundred. A. C. Given, Route 6, Denver, Colo. Phone Englewood 294 R 12.

99.50% PURE ALFALFA SEED, $16.50 HUNdred, germination almost 100%. Red Clover, $18; Sweet Clover, $8.50; Timothy, $5.50; Grimm alfalfa, $30. Meier Seed Company, Salina, Kan.

LUMBER

FIR LUMBER, MILLWORK, RED CEDAR SHINgles, fence posts, from mills to you. Send bill for delivered prices. Lansdown, Box 909M, Everett, Wash.

MISCELLANEOUS

LEARN MECHANICAL DENTISTRY—WRITE Cross Prosthetic Clinic, Majestic Bldg., Denver.

INVENTIONS WANTED—CASH OR ROYALTY for ideas. Adam Fisher Mfg. Co., 204, St. Louis, Mo.

BEST PARCHMENT BUTTER WRAPPERS, 8x11, neatly printed, 100, 60c; additional 100, 40c. Home Specialty Co., Middleton, Idaho.

FALSE TEETH—PERSONS WEARING PLATES will be greatly interested in our free pamphlet. Address Dept. A, Box 6, Billings, Mont.

CABBAGE AND VEGETABLE CUTTER—SIX knives, prepaid, $1; three for $2. One free to secretary Ladies' Aids. Lusher Bros., Elkhart, Ind.

FORD OWNER—YOUR CYLINDERS OIL UP? Spark plugs quit firing? Stop it. Send $1 for information. Cofer Bureau, 30 Second Avenue, Long Branch, N. J.

SCENARIOS WANTED—DIRECT STUDIO SERvice; membership now open to talented amateurs. Address Sec. American Screenwriters' Society, 5821 Santa Monica Blvd., Hollywood, Calif.

SEND FOR OUR WHOLESALE WEEKLY PRICE lists; it will keep you posted on the rock-bottom prices, and will help you save from 25 to 40 per cent on your supplies. Stock Growers Wholesale Supply Co., 1523 19th St., P. O. Box 1442, Denver, Colo.

PATENTS—BOOKLET FREE. HIGHEST REFerences. Best results. Promptness assured. Send model or drawing for examination and opinion. Watson E. Coleman, Patent Attorney, 624 F St., Washington, D. C.

LET US TAN YOUR HIDE—COW AND HORSE hides for fur coats and robes. Cow and steer hides into harness or sole leather. Catalog on request. We repair and remodel worn furs; estimates furnished. The Crosby Frisian Fur Co., Rochester, N. Y.

NOW IS THE TIME TO ENTER BUSINESS— Our position calls have increased 50 per cent over last year. Write for 56-page catalog, mailed free. Barnes Commercial School, 1625-45 Champa St., Denver. Largest business school in Rocky Mountain region. Begin at any time.

AUTOMOTIVE TRADES TAUGHT—DENVER INstitute of Technology guarantees satisfaction teaching following trades: Automobile and tractor repair, automotive electricity, storage batteries, welding, vulcanizing; 15 years' experience. Write for booklets. Y. M. C. A., Denver.

NURSES TRAINING SCHOOL—PARK AVE. HOSpital, Denver, Colo., offers a thorough training to young women desirous of becoming professional nurses. This is a fully accredited school. Course is three years. During training students receive full maintenance, tuition and all uniforms; also money allowance of $6 per month to cover other hospital needs. Apply Supt. of Nurses, Park Ave. and Humboldt Sts., Denver, Colo.

HONEY.

"THEBESTO ROCKY MOUNTAIN HONEY," none better; satisfaction guaranteed or money back; five-pound can, postpaid $1.50. Send remittance with order. Write for price on large quantities. The Colorado Honey Producers Association, Denver, Colo.

KODAK FINISHING.

KODAK FILMS DEVELOPED FREE, PRINTS 2½c each. Kodak Studio, Denison, Texas.

TRAPPERS' POISON.

GOES' LIQUID POISON CAPSULES KILL FUR animals on the spot; seventeenth season in use with excellent results. I send free circulars. Mention this paper. Edmund Goes, Milwaukee, Wis. Station C.

TOBACCO.

NATURAL LEAF TOBACCO — CHEWING, 5 pounds, $2, 10 pounds, 3. Smoking, 10 pounds, $2, postpaid. John Riley, Dresden, Tenn.

FREE TOBACCO—WRITE FOR SAMPLE OF Kentucky's best smoking tobacco. Hawesville Tobacco Co., Hawesville, Ky.

NATURAL LEAF TOBACCO—CHEWING, 5 LBS. $1.75; 10 lbs., $3. Smoking, 5 lbs., $1.25; 20 lbs., $3.50. Send no money. Pay when received. Tobacco Growers' Union, Paducah, Ky.

KENTUCKY TOBACCO—3-YEAR OLD LEAF— Don't send a penny, pay for tobacco and postage when received. Extra fine, chewing, 10 lbs., $1; smoking, 10 lbs., $2.50; medium smoking, 10 lbs., $1.25. Farmers' Union, Hawesville, Ky.

erage income of $32.25 over the cost of feed, while those producing 13,250 pounds showed an average income of $218.19 over feed cost. The cows in the latter group produced about four times as much as those in the other group, and their average income over cost of feed was nearly seven times as great. The increase in income above feed cost grew regularly with the increase in production.

A stury of these records shows that it pays best to put feed into big producers, even though they are big eaters.

A copy of the bulletin may be obtained upon application to the Department of Agriculture, Washington, D. C.

Wyoming Holds Successful Fair.

The Wyoming Free State Fair closed its gates Friday, September 15, on one of the best exhibitions of livestock and agricultural products that have ever been shown in the state. The attendance for the four days was also a record-breaker with more than 12,000 people passing through the gates on Thursday. That the free fair idea, a new one in this section of the West, is a good one was evidenced by the large attendance of farmers and stockmen and their families from all over the state. The weather throughout the week was ideal and many drove long distances to attend the fair.

Known for many years chiefly as a livestock producing state, Wyoming has proven by her exhibits that farming also is a successful venture. A stroll through the large agricultural pavilion was sufficient to convince the most skeptical that Wyoming has taken her place among the agricultural producing sections of the West.

At least half of the counties in the state were represented by agricultural exhibits that furnished close competition in all classifications. The awards in this division were as follows:

For best general display of vegetables—First, Big Horn; second, Fremont; third, Goshen.

For best artistic design, "Name of County," made from agricultural products, the work of 1922—First, Big Horn; second, Niobrara; third, Converse.

For best general threshed grain exhibit—First, Big Horn; second, Goshen.

For best general threshed grain exhibit, grown without irrigation—First, Converse; second, Niobrara; third, Goshen.

For best general sheaf exhibit—First, Niobrara; second, Johnson; third, Converse.

For best general display of vegetables—First, Converse; second, Niobrara; third, Goshen.

For best general dry farming exhibit—First, Niobrara; second, Converse; third, Johnson.

For best agricultural exhibit, to include horticulture, agriculture and apiary—First, Big Horn; second, Goshen; third, Natrona; fourth, Converse.

For best general agricultural exhibit to include sheaf grain, fresh grain, grass and grass seeds—First, Big Horn; second, Goshen; third, Converse.

For best general sheaf exhibit—First, Goshen; second, Big Horn; third, Converse.

In the livestock division Herefords had a slight lead in numbers over the Shorthorns, with classes in both breeds creditably filled. The show of dairy cattle was rather light, but the swine breeders of Wyoming and Nebraska brought together the best showing of porkers ever made in Wyoming. In the sheep division a strong showing of Rambouillets, Hampshires, and Corriedale attracted the eye of the many sheepmen who visited the fair.

The Hereford herd of J. D. Canary of Littleton, Colo., took the majority of the blue ribbons in this division, with first prize on junior yearling heifer, first on steers going to the herd shown by the University of Wyoming. Other Hereford exhibitors were D. T. Prosser of Tie Siding and A. E. Ragan of Wheatland.

The Shorthorn herd of D. Warnock & Sons, of Loveland, Colo., was strongly represented by a well balanced show string, as was also the herd of C. Hauf & Sons of Glendo, Wyo. Supreme Model, shown by Warnocks in the aged bull class, was easily the outstanding individual of the show and was well placed as senior and grand champion bull. The female championship went to Hauf's on an aged cow, while the senior yearling herd sire of the University of Wyoming was made junior champion and Wyoming state champion over Roan Archer, shown by the Hauf's.

Holstein and Ayrshire cattle shown by the University of Wyoming won in their classes, while the blues in the Jersey classes went to B. G. D. Bishop of Virginia Dale, Colo.

In the sheep barn, as usual most of the blues went to those veteran breeders, King Bros., of Laramie, Wyo. They captured all the firsts but one in Rambouillet classes, including the champion and grand championship on rams. A fine showing of Corriedales brought much favorable comment from visitors though there was no competition in this class. Robert Taylor of Abbott Island, Neb., and Chandler Bros. of Iowa also had good Rambouillet exhibits.

The Wild West show was dispensed with in connection with the fair this year, but a good racing program was staged during the entire week.

Record Show at Montrose.

An increase of a thousand entries over any previous exhibit was the record made at the Western Slope Fair held at Montrose last week. This is the first year this association has maintained a paid secretary and the results have justified this expense for the fair has made a big step forward. A total of 135 hogs were shown. There were forty-one in one class, that of the boys' and girls' clubs. Dick Jay, livestock specialist from the Colorado Agricultural College, says it was a real hog show from the start. The best hog barn on the Western Slope has been provided for housing the exhibits, including the judging arena in one end where spectators sit in comfort seeing the work of placing the entries. There were fifty breeding sheep shown and fifty horses. The cattle entries totaled forty-one, mostly dairy cattle. An exceptionally good showing was made of farm crops and fruit, and the community displays called for special commendation.

Duroc Breeders Optimistic.

An increase of 25 per cent in receipts and pedigrees recorded for the year ending August 1 over last year is reported by Secretary Evans of the American Duroc Jersey Swine Breeders' Association. For the first ten months of the present year more cash has been received and more pedigrees recorded than in the entire twelve months ending the first of last November. There has been a decided change in the tone of letters coming from breeders during the past three weeks, says Mr. Evans, and indications are that for the most part Duroc breeders are entering into their work for the fall and winter with renewed courage and determination. The fact that the large shows have in nearly every state shown improvements in both quality and quantity over 1921 is another indication of progress. In all the state shows held so far reported to the office of the association, the number of Durocs shown has led all other breeds. The American association office has sent out more literature for vocational and agricultural schools in the past four weeks than in any year in its history, and the calls still continue in large numbers. The association has morre than used up its budget set aside for this work, but is going on supplying the wants as fast as it can. Duroc pig club projects have been very successful this past season and the shows yet to be held indicate that the contests will be warm.

Butter Intentions Were Good.

"Grocery butter is so unsatisfactory, dear," said Mrs. Young-bride, "I decided today that we would make our own."

"Oh, did you?" said her husband with interest.

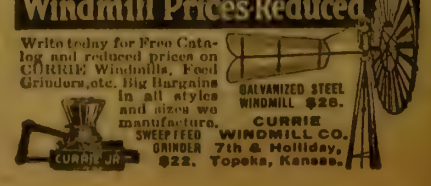
"Yes, I bought a churn and ordered buttermilk to be left here regularly. Won't it be nice to have really fresh butter?"

The car owner should remember that when the clutch is fierce in taking hold and does not have a slight slip, the mechanism that transmits the power from the engine to the drive wheels, particularly as regards pinions, universals and gear teeth, receives destructive strains.

ARMY GOODS.

SALVAGE AND SURPLUS SALE OF ARMY goods. Post Army Store, 921 18th St., Denver, Colo. Write for price list.

SALVAGE AND SURPLUS SALE OF ARMY goods. Denver Army Store, 1443 Larimer st., Denver, Colo. Write for price list.



LIVESTOCK NOTES.

Zang's famous imported stallion, Champagne, died on the Elmwood Stock Farm near Broomfield last July. Perhaps no other horse in America made a better national and international record as a show horse. The records of the Percheron Society of America show that Champagne won the Grand Prix in France, and first prize at Nogent as a two-year-old before importation. Immediately after importation in 1907 he won first prize at the International in the two-year-old class. Later he was grand champion at the Indiana State Fair, the Illinois State Fair, the Missouri State Fair, American Royal Stock Show, the Western Stock Show, and the Colorado State Fair. He remained the undefeated champion of the Denver shows for ten years. He is known best in Colorado for his get and his influence on the horse stock of the country will long be felt.

H. F. Harmon breeds some real Shorthorns and he is taking quite an itnerest in better cattle. The herd is headed by Royal Model and he is siring some good calves.

Among the good breeders in Boulder county is our good friend A. D. McGillvray, breeder of big type Polands. His herd is headed by a good son of Avalanche, by The Clansman, and he has an excellent lot of spring pigs and some going to the fair that will make the boys look.

One of the good sales of the season will be that of Jake Kalberer's at Bloomfield, Colo., on November 1, when forty head of some of the best Holstein cattle in the west are to be sold. The offering is mostly all producing cows and heifers sired by some of the best sires of the breed. Some choice young bulls and heifers will make up the offering. Write Jake Kalberer at Bloomfield, Colo., for catalog.

The Elbert County Shorthorn Breeders' Association will hold a public sale of purebred Shorthorn bulls and females in their sales pavilion at Elbert, Colo., October 18. Write to Dewey Carnahan, Elbert, Colo., for catalog and full particulars of this sale.

October 14 is the date of the Bonvue Farms Co. sale of Milking Shorthorns. This is one of the big Milking Shorthorn events of the West this fall. The sale will be held at the ranch near Golden, Colo. See special announcement in this issue.

Johnson Brothers and Hahnewald Sale.

One hundred and twenty head of registered purebred Hereford bulls and females will be offered at public auction, Grand Junction, Colo., October 20, by Johnson Brothers of Eagle, Colo., and Paul Hahnewald, Eagle and Buford, Colo. Mr. Hahnewald some time ago purchased the A. Christensen herd that is well known to Stock Show visitors and western breeders, and his offering at this sale is largely from this herd. Beau Blanchards and Gay Lads and other excellent strains predominate in this sale offering. Catalogs are now ready. See sale announcement in this issue.

The number of cattle born between January 1, and September 1, 1921, was 10.1 per cent less than in same months of 1920, and 22.6 per cent less than 1919. The total disposition of cattle by sale, slaughter and deaths was 20.1 per cent less than 1920, and 22.4 per cent less than in 1919. Supplies in the United States on September 1, 1921, appeared to have been about two-tenths of 1 per cent less than on September 1, 1920, and 4.8 per cent less than on September 1, 1919.

When you buy a purebred bull you look up his pedigree. But when you go to a seed house for pure seed, do you inquire about its pedigree?

PRIZES
TAKEN BY THE
WYLDEMERE FARM
Milking Shorthorn Herd
AT THE WESTERN STOCK SHOW, DENVER, 1922.

2nd Prize Royal Glenside.....Aged Bull. ....
1st Prize Calf Herd.....
1st Prize Get of Sire..... } The Get of
1st Prize Young Herd..... } Royal Glenside
1st Prize Produce of Dam....
1st Prize Yearling Bull.....
1st Junior Champion..... } The Get of
1st Reserve Grand Champion.. } Royal Glenside
1st Prize Junior Bull Calf....
1st Prize Senior Bull Calf....
1st Prize Senior Heifer Calf.
1st Junior Champion Female.
1st Grand Champion Female.
2nd Prize Two-Year-Old Heifer.
4th Prize Two-Year-Old Heifer.
4th Prize Senior Yearling Heifer.
2nd Prize Junior Yearling Heifer.
3rd Prize Junior Yearling Heifer.
4th Prize Junior Heifer Calf.

FOR DISPOSAL—Several heifer calves out of R. M. cows, with records over 10,000 lbs. Inspection invited. Avoid correspondence, as these calves must be seen to be appreciated.

J. B. BENEDICT, WYLDEMERE FARM
LITTLETON, COLORADO

Shorthorns That Milk
ARE MONEY MAKERS.

A herd that will give you a good monthly cash income is what you will need in the future. One of our young bulls from a Record of Merit cow can develop your herd into a dual-purpose paying proposition.

We know the war is over and have bulls for sale at prices that you farmers and ranchmen can afford to buy. Write for our bargain list and easy payment plan.

We also have several young bulls for sale, priced to sell.

THE PINE VALLEY DAIRY & FARMS CO.
Seeley G. Rose, Mgr. Colorado Springs, Colo.

Bates Shorthorns
are the foundation blood of true Milking Shorthorns. We have them. A few bulls for sale.
THE CARPENTER CATTLE CO.
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McKAY BROS., Caddoa, Colo.

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The only sale of this character to be held in the West this year. No better opportunity ever offered to buy the right start in this breed so rapidly increasing in demand.

Statistics show purebreds pay nearly twice profit of even good grades. Start now while prices are low.

Sale at Ranch near Golden, Colo., at Noon
THE ILLUSTRATED CATALOG, NOW READY, TELLS THE STORY. ADDRESS
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Johnson Brothers *and* Hahnewald
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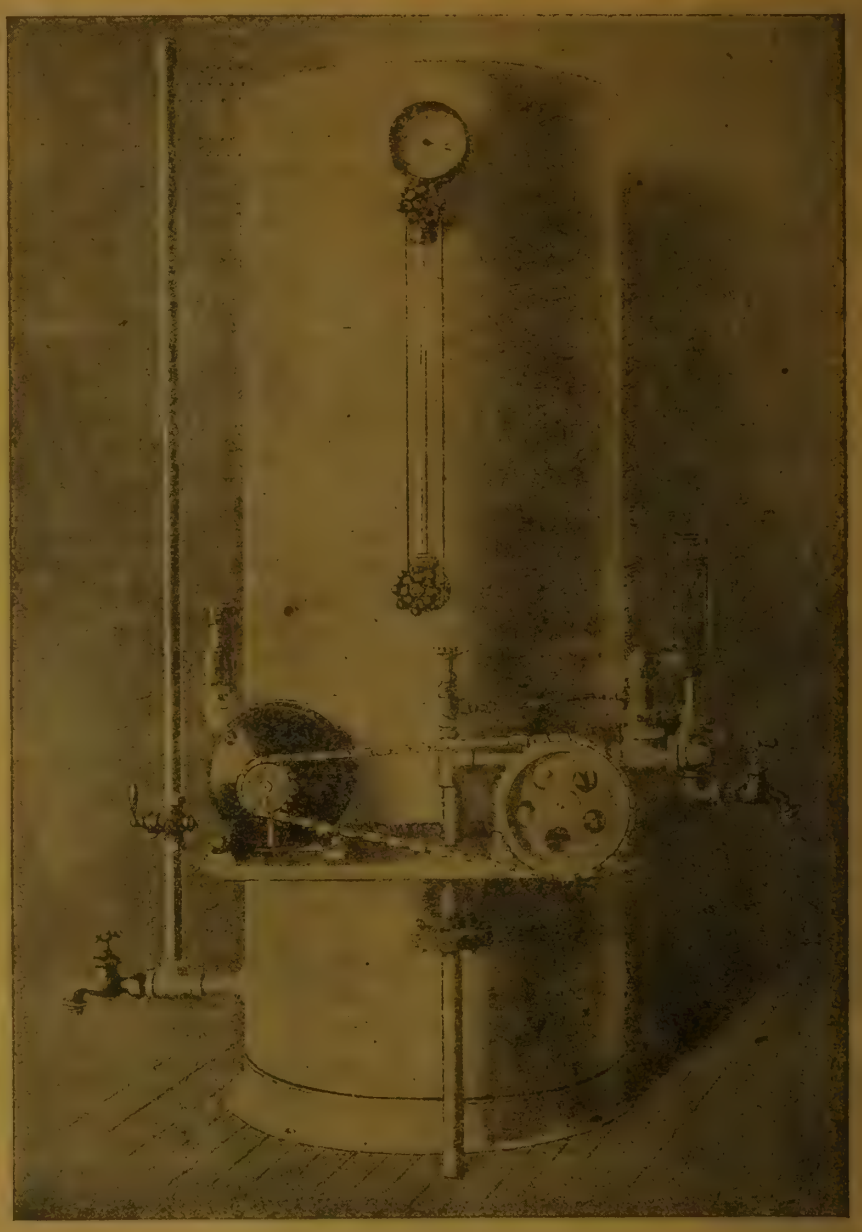

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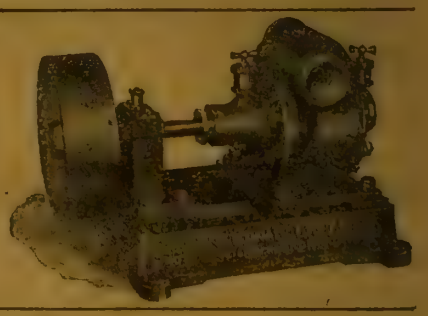

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Well-Balanced Showing of Farm Products at Pueblo — Page 3

WESTERN Farm Life

Vol. XXIV. *Denver, Colo., October 15, 1922.* *Semi-Monthly*

(POLITICAL ADVERTISEMENT.)

The Farmer and the Three Giants

William E. Sweet
Progressive Democratic Candidate for Governor

Why William E. Sweet Is a Candidate for Governor

William E. Sweet is a deep student of political and economic conditions. He has interested himself for many years particularly in the effects of existing conditions upon the farmer and the wage earner, his purpose being to find some way to remove, if possible, some of the handicaps under which these two great groups labor.

Briefly, that is why William E. Sweet is now the Democratic candidate for Governor of Colorado. He has convinced himself, after years of study and investigation, that the objects he seeks can only be attained through sympathetic political action. His plain and fearless statement of his views in the primary campaign this fall convinced the people of the wisdom of his proposals and he received the Democratic nomination for Governor by a majority over his two Democratic opponents and by a larger vote than was given the successful Republican candidate, though the latter had but one opponent.

Mr. Sweet believes that the farmer is not obtaining his rightful share of the profits of the farming industry. Adequate warehouse and storage facilities, strong and effective direction in Co-operative Marketing and a system of long-time reasonable Credit such as is available to most other industries are the THREE GIANTS which he believes will protect the farmer in his rights.

THE FARMER does not receive a large enough share of the dollar which the consumer pays for farm products. Nobody denies it. Learned economists have been proving it for years and the politicians all agree they are right. The consumers, who must pay $2 a bushel for peaches, for example, can see no reason why the man who raised the peaches should get but 50 cents. Conversely, if the farmer gets but 60 cents per 100 pounds for his potatoes, they do not understand why they are forced to pay $2. They do not so much object to paying the $2, but they feel that an injustice is being done when its costs from two to four times as much to put the potatoes, peaches, or other farm products in the consumer's cellar as the farmer gets for growing them.

The truth of the matter is that the farmer in most cases does not receive enough for his products to pay him adequately for producing them, much less to pay interest on his investment. The farmer is entitled to a fair profit on his investment, the same as the merchant, the railroad company or the public utility corporation. He is entitled to a living wage for his labor, the same as the factory worker, the railway shopman or the coal miner.

William E. Sweet believes that the chief reason why the farmer does not receive a fair share of the consumer's dollar is that the farmer exercises no control over the market for his commodities. The merchant tells the farmer what he must pay for everything he buys, but the buyer tells the farmer what he (the buyer) will pay for farm products. The farmer must take it or hold on till the market improves, or in other words, until the buyer is willing to pay a little more.

But under existing conditions the farmer cannot hold his products until the price suits him. The first problem that confronts him when his crop is harvested is his urgent need for money. Generally he has a note coming due at the bank about harvest time and the bank must have the money. To get the money he must sell the crop.

If he is fortunate enough to be financially able for a time to defer marketing his crop he has no place to store it properly. He raises much larger crops than he did formerly and individual storage bins and cellars are far from adequate. They are not sufficient protection against damage to his crops. It has been demonstrated that farm storage will never prove adequate under existing conditions, even if the farmer should never desire to exchange his goods for a warehouse receipt, upon which he could borrow money at a reasonable rate until he desired to sell.

So the farmer generaly is forced to sell at harvest time, when all other farmers are selling. The farmers' market is a buyers' market and the farmers are competing against one another to sell, thus aiding the buyers in depressing the price. His products pass into the hands of the speculators, who hold them until the demand from consumers becomes sufficient to enable them to advance in price.

Mr. Sweet's view on the question of storage warehouses, as well as the views of all Democratic candidates for office in Colorado on November 7, are expressed by the following extract from the Democratic platform:

> **"The Democratic party pledges itself to undertake in a limited and reasonable way the erection and operation of Storage Warehouses for farm products. This will enable the farmer to market his products gradually as the demand requires and will result in his securing a larger share of the consumer's dollar."**

But the farmer is not an expert at marketing. In the nature of things he can never be that. He is too busy with other duties. Mr. Sweet and the other Democratic candidates realize that Colorado must be given the benefits of a system of co-operative marketing, similar to that by which the farmers in California have been marketing many of their crops to advantage for several years. The Democratic platform has this to say on the subject:

> **"We demand that a State Market Commission be created, modeled after that of California and corresponding to the Federal Bureau of Markets, with a State Market Director to act as advisor for producers and distributors and to assist them in getting their produce into a fair market.**
>
> **"The State should encourage the organization of cooperative marketing associations to protect the producer and his interests as consignor of his products. This will do much to stabilize the business of farming, which is so necessary to general prosperity."**

The question of reasonable and elastic credit is another question of vital importance to the farmer. The Democratic platform pledges Democratic candidates to the support of a law which will require that at least 50 per cent of the permanent school fund of the state shall hereafter be invested in mortgage loans on Colorado lands. This will increase the funds available for long-time loans to Colorado farmers by several millions of dollars and will have the effect of reducing the price of credit to the farmer.

The logical development of the proper warehousing of farm products will also provide additional short-time credit to farmers at reasonable rates, in the opinion of Mr. Sweet. The time is not far distant when the farmer will be able to store his products in some sort of public warehouse, to take warehouse receipt for these goods and to borrow money on the receipt, much as the merchant borrows money against his invoice.

Adequate Warehouse and Storage Facilities, strong and effective direction in Co-operative Marketing and a system of long-time, reasonable Credit for farmers—these are the Three Beneficent Giants which Mr. Sweet and the other Democratic candidates propose to bring to the aid of the Colorado farmer.

Nor do they propose to increase taxation to do it. Strong warehouses will pay their expenses. Private storage warehouses generally are profitable investments. The people who use them pay the expense FROM THEIR INCREASED RETURNS FOR THE PRODUCTS STORED.

The Republicans insist that all these questions are federal questions. Mr. Sweet and the other Democratic candidates agree that they be most effectively settled when they are adequately settled by federal enactments. But woman suffrage, national prohibition, income tax and many other equally important national questions were first introduced by individual states.

Vote for William E. Sweet for GOVERNOR

and for Entire Democratic Ticket on November 7th

Western Farm Life

A Western Magazine for Western Farmers and Stockmen

VOL. XXIV. DENVER, COLORADO, OCTOBER 15, 1922. No. 20.

Well-Balanced Showing of Farm Products at Pueblo

BOYS' AND GIRLS' CLUB CAMP UNIQUE FEATURE OF GREAT EDUCATIONAL VALUE

By George C. Wheeler and H. W. Hailey.

SUBSTANTIAL progress has been made in the matter of buildings and improvements on the State Fair grounds at Pueblo. The exhibits of cattle and horses were housed in a large building of tile block construction particularly well adapted to the purpose. The fair as a whole this year was a comprehensive showing covering most of the important interests of the state. To one attending this fair for the first time it seemed there was not sufficient interest in the agricultural and live-stock exhibits and other educational features. It would appear that farmers and stockmen of the state are not as yet making attendance at the State Fair a part of the annual program.

The weather of the week was favorable and in point of attendance and general interest this year's fair was a success. From all sections of the state exhibitors of farm products vied with each other in a spirit of keenest rivalry. This was particularly true in the sections devoted to farm crops and horticultural products. From the opening day until late in the week exhibitors were enthusiastically carrying their best entries to the table where the judges worked and with high hopes watching while the awards were being made.

Big Showing of Fruit.

In the fruit section there was gathered probably as large and fine a display of fruit as will be shown at any western fair this side the Pacific Coast. Fremont county had the largest showing in the county competition and won the sweepstakes prize for best display of fruit. The other counties in the order of their standing, were Delta, Mesa, Montrose and Douglas. So close was the competition that only a few points separated the contestants for this much-coveted prize. Three double-deck tables fully fifty feet long were used by the Fremont county plate exhibits and more than fifty boxes of apples were placed on the fourth table. R. J. Barnett, associate horticulturalist from the Kansas State Agricultural College at Manhattan, had no small task in placing the awards, a duty which he performed to the satisfaction of practically all the exhibitors. The grand sweepstake prize was a gold and silver loving cup and $200 in cash. Only first prize winners in the various districts into which the state is divided compete for this grand prize. In No. 1 district Logan county was first and Washington second. Douglas county was first in district No. 2, and Huerfano second. Fremont county was first in district No. 4 and Crowley second. In district No. 5, Mesa county won first place, no second being awarded. Delta county was first in district No. 6, and Montrose second.

Twenty-two County Farm Exhibits.

Collective exhibits of farm products made a big gain over similar exhibits at any previous fair. Twenty-two counties demonstrated in this manner the resources and production of their respective counties and the visitor making a careful study of these various exhibits obtained a very good idea of the kind and quality of production in the various sections of the state. County agricultural agents were largely responsible for the collecting and showing of these exhibits, backed financially by the boards of county commissioners of their respective counties and various business organizations.

In the space available it is impossible to touch upon all the county exhibits placed in the agricultural building. Pueblo county had as a feature of its display a most unique map of the county on which the actual products of the various localities were glued in such a manner as to show the relative production of each. Otero county, in addition to showing a complete assortment of the varied high quality products of the county, had a chart indicating the extent to which local markets were created for its various products, enumerating the sugar factories, flour mills, canning factories, creameries, cheese factories, seed firms and similar industries and indicating the number of acres of the various products each industry consumed. El Paso county, showing for the first time, had an exhibit centered around a large painting of Pikes Peak which attracted much favorable attention. The slogan of the exhibit was "Profitable agriculture at the foot of a world-famous mountain."

Max Avalanche, senior and grand champion Poland China boar at Colorado State Fair, Pueblo. Owned by A. D. McGillvray, Boulder, Colo.

Elbert county's exhibit was characterized by its display of native grasses, there being ninety-four species shown. Douglas featured dairying as one of its outstanding industries. Saguache in its exhibits indicated the importance of seed improvement, particularly in the growing of high quality potatoes. Logan county's exhibit was characterized by the great variety and high quality of the products shown. Huerfano county had a goodly showing of the products of plains farming, including the various feed crops. The Western Slope counties of Conejos, Alamosa, Rio Grande, Moffat, Montrose, all showed high quality exhibits of wheat, oats, barley, potatoes, alfalfa, peas, and feed crops and vegetables adapted to the conditions. The eastern plains counties of Kiowa, Lincoln, Washington, Crowley, were characterized by their excellent showing of grains and feed crops.

First prize yearling Hereford herd at Colorado State Fair. Bred and exhibited by T. F. DeWitt, Denver.

Logan County Wins Again.

The awards for the county collective exhibits were placed on the basis of a carefully worked-out scale of points. Logan county topped the list with 395 points; Douglas took second, 367; Otero, third, 322; Rio Grande, fourth, 315; Pueblo, fifth, 310; Montrose, sixth, 304; Fremont, seventh, 275; El Paso, eighth, 271; Alamosa, ninth, 263; Saguache, tenth, 250; Crowley, eleventh with 243 points. This is as far down as the money awards reached, the eleventh prize being $20 and the first $225. The points made by the remaining counties are as follows: Moffat, 237; Huerfano, 233; Elbert, 224; Kiowa, 202; Washington, 187; Lincoln, 186; Conejos, 162; Prowers, 158; Delta, 150, and Morgan, 135.

Several large tents were devoted to the showing of automobiles and farm machinery and equipment and much machinery was out in the open. These exhibits of farm equipment were well studied by many of the fair visitors, indicating interest in making farms and farm homes as efficient as possible.

Government Exhibit Aroused Popular Interest.

A most instructive exhibit was that of the United States Department of Agriculture, showing activities of the Forestry Department, the Biological Department and the Roads Department. The danger from fires was most graphically illustrated and the results of forest devastation were shown by actual models of denuded hillsides compared with the same slopes still clothed with trees. Boy scouts assisted H. R. Kylie, in charge of this exhibit, in handing out literature giving in detail the lessons to be taught. J. Keyes and Stanley Young in their exhibits showed how efficiently the Biological Survey is meeting the situation in cleaning up the ranges of predatory animals and destructive rodents, thus saving thousands of dollars to stockmen.

Big Gain in Club Department.

The boys' and girls' club encampment is an outstanding feature of the big fair at Pueblo. Probably no other event or exhibit put on at this fair has a wider educational influence. This year more than 350 Colorado boys and girls were in attendance and all through the week showing of the various club exhibits and demonstrating before the public the things they were learning to do, occupied their time. These boys and girls are the winners from the various local clubs all over the state. It is the place where the championships are decided in the club work. It gives these local winners the opportunity to study a big fair in all its many features as well as the various industries carried on in the city of Pueblo.

The buildings provided for the club work are totally inadequate and it is to be hoped that the fair board will soon be able to house the young people and their leaders who attend the encampment in a manner commensurate with the importance of the project. The leaders in charge of this department of the fair activities, including Miss Maude Sheridan, State Club Leader, superintendent; W. R. Freeman, Assistant State Club Leader, assistant superintendent; C. O. Plumb of Weld county, superintendent of camp; W. R. Vance, Washington county, chief chaperone of boys; Mrs. Edwin Ramsey of Denver, chief chaperone of girls; D. A. Jay, Extension Service, Colorado Agricultural College, superintendent of livestock exhibits, and Mrs. Josephine Lee Ferguson of Boulder county, super- (Turn to Page 12)

Fall and Winter Work on the Plains Farm

RIDGED LAND HOLDS SNOW, AND MOISTURE FOR CROP IS STORED

E. R. Parsons.

WE have always recommended the farmer to plow as much as possible in the fall for many good reasons. Clays and adobe soils are always difficult to plow in the spring after wet weather, but will often plow more easily when nearly dry, and if exposed to the freezing and thawing of a hard winter will mellow down sufficiently to be worked up into a fine seed bed by planting time in the spring. For the same reason all soils are benefited more or less by plowing at this time and the fields been left in the rough catch much snow which cannot get away, but melts little by little and is absorbed into the subsoil between the furrows during the thaws.

Conserving Winter Moisture.

It should be noted that as soon as smooth land becomes a little moist it freezes solid and can absorb nothing during the winter, and all the snow blows off it. Now, in accumulating and conserving moisture the snow is a valuable factor. Every farmer knows that any object in the path of the storm makes a backwind or whirlwind which creates a snowdrift. We can take advantage of this action by piling up the dirt in ridges with a lister on all smooth slopes and table lands where the snow usually blows off. This is done by plowing every alternate furrow, which throws up the dirt in the unplowed furrow leaving a ditch or hollow sometimes nearly two feet deep. These depressions nearly always fill up with snow and as it thaws a little and settles the next storm fills them up again until the total gain may be as much as two or three inches of water. How often has a crop failed for the want of one or two more inches.

After listing, the middles should be plowed out as early as possible in the spring and the field can then be prepared for planting. The single disk plow is very useful as an emergency implement, but if used every year on the same land the crops will not be as good as when the moldboard does the work.

Plow Deep in Fall.

Fall and winter plowing should be as deep as possible. Provided the soil is good and not too refractory and cloddy down below, it is impossible to plow too deeply. The agricultural department of France reports that some of the finest crops ever matured were raised on the filled-in war trenches and in places where the German shells fell the thickest and subsoiled the land from two to three feet deep.

Some years ago our sugar companies sent to the old country for a beet expert to explain how it was that our best yields ran about ten tons to the acre, while over there they raised from fifteen to thirty. The first thing he said after looking over our fields was, "How can you expect to raise a twelve-inch beet in six-inch plowing." Our beet farmers now plow deep and also use a subsoiler which loosens up the subsoil but does not bring it to the surface. The big crops they get are now a matter of history, and when they rotate with grain the yield is also about double what it used to be.

When to Subsoil.

We are asked sometimes as to whether it is better to plow nine to ten inches deep with a moldboard plow, or to plow five or six inches and then subsoil to a total depth of ten or twelve inches. It is a good idea to plow under sod, humus or surface trash as deeply as possible to conserve it, for it will create a deeper and more fertile seed bed in the end. On the other hand, if the subsoil is rough and lumpy it is better sometimes to plow shallower and obtain the much needed depth for moisture conservation purposes by using a subsoiler. The principal reason for deep plowing is to accumulate moisture in the subsoil where it is safe from evaporation and nothing but the roots can get it.

It used to be the belief that we cultivated the surface to bring the moisture up from below to the roots in the top soil by capillary action, but this idea has been exploded by the discovery that there is little or no capillary action without free water. There is seldom any free water in the soil of our plains states because the dry subsoil allows the precipitation to sink deeper and deeper, spreading out as it goes and becoming film moisture. The film moisture in the soil may be as high as 17 or even 20 per cent, but as soon as the percentage becomes high enough for capillary action to occur, which means free water, it again works out into the dry subsoil. It is a good thing for the farmers that this action is limited, for if it went on until there was only 5 or 6 per cent left in the soil, there would not be sufficient for crops. We would have ten feet of soil holding 5 per cent moisture instead of three or four feet holding 15 to 17 per cent.

Roots Go Deep for Moisture.

The difference between broken and unbroken soil can be appreciated from the fact that on our raw prairies the winter and spring moisture seldom goes below two feet, being mostly evaporated back from the surface before it has a chance to be absorbed. On deeply worked land it is at once conducted into the subsoil where it is safe from evaporation until the roots use it up. Those who believed in the capillary theory imagined that the roots of crops remained altogether in the top few inches like a geranium in a pot, but this is altogether an erroneous idea. Roots may go almost any depth for moisture. At the experiment station at Cheyenne, Wyo., some roots of winter wheat were exhumed from a deeply plowed and fallowed field which measured seven feet in length. They were exhibited at the Dry Farming Congress exposition. The roots of corn and sorghum often go ten feet. Now, if by conducting the water into the subsoil we can grow crops on six or seven inches the yield will be in like proportion.

Depth to Plow in Fall.

We have already seen that the unbroken prairie sod accumulates only a foot or two of moisture during the winter and spring months, but in the deeply plowed field we often find from three to four feet of moist soil containing a full allowance of film moisture, approximately 17 per cent, about the usual holding capacity for good soil. This means, roughly speaking, about two inches to the foot, so that the amount conserved in a wet season may be from five to eight inches of water against four inches in prairie sod and probably not more than five or six on smooth land not worked in the fall.

Now, supposing it is too dry to do a good job of plowing in the fall or early winter months, what should the farmer do? He should plow as deep as he can trusting to the freezing and wet weather later on to break down the clods and mellow the surface, in which process he can also assist with one of these modern clod crushing rollers. If his plowing is shallow in the fall no small grain should be planted on it the following spring, but it should be plowed again deeper in February or March and held for late crops to be planted in May or June.

For the reason that it is not always possible to plow deep enough in the fall for the planting of small grain in the spring, we always advise the farmer to confine himself as much as possible to the raising of winter wheat or rye on land which can nearly always be plowed good and deep after the spring rains and fallowed until planting time in August or September. Corn and late crops will do on land which is less packed than that needed for grain and it is sometimes found that all plowed land does not give the best results unless replowed in the spring.

Plant With Lister.

The farmer of course does not like to plow twice for a single crop and the best way out is to plant the corn or sorghum with a lister which loosens up the land sufficiently after it has become packed by the winter moisture. The listing should be done across the plowing. This method of plowing in the fall and then listing in the seed across the plowing in the spring has given much satisfaction in western Kansas and Nebraska. These late crops usually will do fairly well on land plowed in March or the first half of April when no fall plowing is available. We do not recommend plowing for any crop and planting immediately. It is often done and is sometimes successful if the season is propitious, but all the same it is always better not to take any more chances than are absolutely necessary. For crops like potatoes and beans it will always pay to plow in the fall and also in the spring, but it is not necessary that both plowings be deep.

Do Not Forget Garden.

At this time of the year we must not forget the garden. If the soil is dug or plowed twelve inches deep and some rotten fertilizer or leaf mold turned under and then lightly worked over in the early spring, everything can be raised without water if necessary, but if any watering is done it should be put off until the last minute in order that the roots may go down as deep as possible.

Using Cull Potatoes as Feed

KNOWING NUTRIENT VALUE, GROWERS CAN UTILIZE CROP WISELY.

IN view of the present potato marketing situation definite information as to the feeding value of potatoes is most timely. In many sections there will be a surplus of potato stock which cannot profitably be marketed. From practically all consuming markets come insistent demands that only U. S. No. 1 grade potatoes be shipped.

In the new edition of Henry's "Feeds and Feeding," which is a standard text book on stock feeding in this country, F. B. Morrison is taking up the question of feeding potatoes to livestock in a newly prepared article. He points out that in Europe heavy-yielding varieties of large-sized potatoes are extensively grown for stock. In this country, however, potatoes are fed only when low in price or too small for market. Prof. Morrison states that farmers who know definitely the feeding value of potatoes are in a position to utilize the crop wisely in feeding livestock rather than to force it on a profitless market.

Potatoes are chiefly employed for swine feeding, but may be fed in limited amounts to cattle, sheep and horses in partial substitution for grain. For pigs, the tubers should be boiled or steamed, and mixed with meal. The heavy feeding of raw potatoes is not advisable, as it induces scouring, but they may be fed in limited amounts sliced and mixed with dry feed. The bitter-tasting water in which potatoes are cooked should be thrown away, especially if the tubers are not sound.

Right Amount to Feed.

According to Pott, potatoes may furnish half the dry matter in the ration for fattening cattle and sheep, and one-fourth for horses. Milk cows should not be fed more than 30 to 35 pounds, as larger amounts injure the quality of the butter. Unripe potatoes and especially the sprouts of stored potatoes contain considerable solanin, a poisonous compound; hence in feeding potatoes, any sprouts should be removed.

In Germany, where machinery for drying potatoes has been perfected, the dried product is quite extensively fed to livestock. To produce one ton of the dried potato flakes from 3.5 to 4.0 tons of raw potatoes are required.

A heavy allowance of potatoes produces milk of poor flavor. They may be used with success, however, when not over about 33 pounds of cooked potatoes are fed per head daily, or somewhat less of the raw tubers. When feeding a heavy allowance of potatoes, Hills of the Vermont Station found the dry matter in corn silage superior to that in raw potatoes. Butter from the potato-fed cows was salvy.

Result of Experiments.

Another authority says: Marketable potatoes are usually worth too much to feed to hogs, but cull potatoes can be economically utilized for pork production. They should preferably be cooked for swine and should be fed with concentrates. To balance the ration some protein-rich food should be added, as potatoes have even a smaller proportion of protein than does corn.

In two trials by Henry at the Wisconsin Station, 442 pounds of potatoes fed after cooking equaled 100 pounds of corn. At the Copenhagen, Denmark, Station, Fjord found 400 pounds of cooked potatoes equal to 100 pounds of mixed grain, and in trials by Fjeldsted and Potter in Oregon it required 422 pounds cooked potatoes to replace 100 pounds of barley. Averaging together the results of these different stations, we may conclude that it will require about 420 pounds of potatoes, fed after cooking, to equal 100 pounds of corn or barley in feeding value.

For the best results, the proportion of potatoes should not be greater than four pounds of potatoes to one of concentrates. At the Oregon Station, Potter found potatoes fed raw were worth only about two-thirds as much per 100 pounds as when fed after being cooked.

Potato Silage.

Potato silage, made by crushing potatoes with a special machine and adding 2 per cent of corn meal to inoculate the silage with lactic acid bacteria, was worth less than half as much per 100 pounds as cooked potatoes in a trial by Morrison and Bonstedt at the Wisconsin Station.

Store Vegetables for Winter Use.

By paying proper attention to the storage of vegetables on the farm, these products will be a most valuable addition to the family diet during the winter season. Fresh vegetables are always more acceptable than the canned or preserved products. The value of vegetables in the diet is generally recognized and more should be done to encourage the use of vegetables during the winter months.

Most of the common vegetables can be stored in the ordinary cellar, if proper precautions are taken to keep them from losing their freshness. Potatoes, beets, carrots, parsnips, winter radishes, turnips, rutabagas, salsify and kohlrabi all can easily be stored in an ordinary cellar. In storing vegetables it must be kept in mind that there is considerable difference in the eating qualities of the various crops enumerated. Small, ill shaped vegetables are usually bitter and woody. The same is true of large over-grown specimens. These are usually either coarse and soggy, or else woody. They do not keep well and are inferior in food value. It is very important in the case of root crops that smooth medium sized specimens are stored. They should be free from dirt, but not washed. They should be perfectly dry and in cutting off the tops of the root vegetable, the cut should not be made too close to the root so as to expose a portion of it, but rather leave the neck connected with the root. Their keeping qualities are greatly increased. All the root crops require about the same condition in storing. This enables one to store them together without having to separate them. The storing should not be done until late in the autumn, in order that the vegetable may be fully matured.

Extension Bulletin No. 174A, "Storing Vegetables for Home Use," gives full information on this subject and may be had free an opplication to Colorado Agricultural College, Fort Collins.

Find Just What You Want.

Whenever you are in need of anything for your farm, ranch or household, and do not know where to buy it, look over the Farmers' and Stockmens' Ready Reference Directory in this issue. There you will find almost everything under the sun offered for sale by reliable firms that will treat you right in both price and service.

Market Outlook for Farm and Ranch Products

WHEAT GOING INTO CONSUMPTIVE AND EXPORT CHANNELS AT GOOD RATE

Edited by Glenn G. Hays.

PRIME steers reached a new top of $12.55 at Chicago last week, which is the highest point since the fall of 1920. Such cattle are only to be had at three or four markets at this season of the year and buyers of prime beef are fastidious and able to ignore price. High wage scales enable even the laboring classes which formerly bought grass beef, to be discriminating so that there is a broad demand for the product of good, choice and prime steers, while low-grades are neglected.

Trash usually is over-abundant in the cattle alleys from October to December and this year is no exception. Most of the western rangers are short of requisite finish and the market is overburdened with Southern cattle, part of them grazed in the Northern states. In addition, many Canadians rushed in ahead of the new tariff have been on the market in the last two weeks. Price trends bore a two-sided appearance with values on lower grades down 15 to 25 cents at Chicago, while prime and choice steers were up 50 cents. If transportation were normal, congestion of low grades would be still more marked. As it is, receipts at the leading markets are the largest of the year and above normal for the season.

Shortfeds and warmed up steers also are becoming more numerous right along as a result of the heavy feeder movement in recent months, and some of them are quoted 75 cents lower than two weeks ago, with further recessions not unlikely before the run of grassers subsides.

With so many grass steers and plain shortfeds on the market, butcher cows and heifers have had insecure footing and declined 25 cents last week. Veal calves dropped 50 to 75 cents at Chicabo, with heavy killing classes down even more, which is the normal trend for them at this season.

Feeder Shipments at High Mark.

Shipments of stocker and feeder cattle from the twelve leading markets in the week ending September 22 totalled 148,265 head, equaling the highest weekly record in two years at least, and the total fall movement now threatens to establish a new record. Demand shows no abatement as corn is cheap, prices for finished cattle are high and feeders' profits have been handsome. One load of $12 steers sold recently cost $6.40 last fall. Dry weather in Wyoming, Texas, New Mexico and Arizona is sending a raft of thin cattle to market, including some breeding cows, so that prices have not advanced much. Instead of 1,000 to 1,100 pound steers, most buyers are after 750 to 900 pound weights or even lighter. Experience in recent winter feeding operations justifies the change.

Spring Shoats Showing Up.

Shoats from the spring pig crop are becoming numerous, especially on markets to the south and east. As a result, shipping demand in the Middle West is rather uncertain. Many of these new crop hogs are lacking in requisite finish so that a slight premium is now being paid for butcher hogs weighing around 200 pounds or higher.

Demand for fresh pork is keen and both foreign and domestic buying of cured hog meats and lard maintain satisfactory breadth, so that an increase in the supply of hogs at the leading markets last week was absorbed at high prices until toward the close. The supply at eleven markets totalled approximately 480,000 head for the week, the largest on record for the corresponding week as far back as 1905 at least. The ten-year average for that week is 363,000 head.

The disposition of growers to put on additional weight with new corn or to rush to market early will determine how much of a decline will take place this fall. In neither case is the present price level apt to be maintained much longer.

Lamb Run Still Below Normal.

Receipts of sheep and lambs at the seven leading markets have expanded over 50 per cent in the last six weeks, but the total last week was only about 300,000 head, compared with an eight-year average for that week of 442,000 head. In the past this particular week has marked the high point of the year. It is believed, however, that a number of western lambs have been held back for the late market, partly because of faulty transportation and partly to wait for higher prices. At any rate, the run is still expanding. Even though some increase in receipts does occur, the total is sure to be far below normal for the period. Prices have receded slightly and further loss may occur depending upon the supply, but no drastic decline is in prospect. Dressed lamb prices were affected by larger offerings including some fresh Canadian and frozen Argentine and New Zealand lamb, and by the fact that they were out of line with other meats.

Feeders are taking all the thin lambs they can find at prices above the fat lamb market, but the total movement countryward for the season promises to be but little if any larger than the small one of last year.

Wool Trade Broadens.

Wool trade has broadened since the new tariff went into effect, as manufacturers feel more certain over the outlook. Practically all grades of wool have changed hands at firm prices, with evidence of an advancing tendency.

Wheat Disappearing Fast.

Demand for wheat failed to support prices at the early season level, but a survey of the situation shows that United States wheat has been absorbed into consumptive and export channels at a gratifying rate. Receipts at primary markets since July 1 have not been as large as last year, but taking changes in the visible supply at terminals into consideration, about the same amount has disappeared as in the corresponding period last year and 40 per cent more than the ten-year average.

Exports of wheat and flour combined in the first three (Turn to Page 17)

Business Activity Being Increased

BUSINESS activity resumed its upward trend with a rush following the settlement of the coal and the partial settlement of the railroad strike. The same rate of acceleration is not likely to be maintained over a long period, but moderate improvement promises to continue during the fall.

Evidence of business expansion is found in the rise in bank clearings which measures trade turnover; in car loadings which for the week ending September 16 were the largest in nearly a year, and which have gone so far that railroads now report no surplus cars; in the expansion in bank loans; a slight advance in money rates and a decline in the bond market, indicating that more funds are being used in business development; and in the advance in prices for new material such as iron, steel, copper, lead, wool and hides.

More Men at Work.

The tide has turned in wages as shown by the outcome of the coal strike and the fact that wage increases in the last three months in all branches of employment combined have been much more numerous than wage reductions. A year ago it was estimated more than 5,000,000 men were out of employment, but the number has been reduced to about 1,500,000 at the present time, many of whom are in the floating class rarely found at work.

With wages stabilized on a level only slightly below the peak of the war period, costs of manuactured articles, of mine products, of transportation service and similar commodities and services which the farmer must buy remain out of line with the price of farm products. On the other hand, high wages put the laboring classes in position to pay good prices for farm produce. This factor is believed to be of considerable importance in the maintenance of meat, butter and egg prices at the present time, but it is having little influence upon grain values or fruits and vegetables because of seasonal abundance.

Car Shortage Brings Hardship.

Prospects for the future are not universally favorable by any means. The car shortage becomes more serious each week. Where perishable goods are involved, it inevitably means hardship and it is preventing the sale of as much corn and oats as consumers are willing to take. It may improve slightly after October, however. Unduly high prices for coal are a direct burden upon farmers as well as other consumers and eventually may restrict manufacturing operations. The fact that so large a fraction of the national income is consumed in local, state and national taxes also retards the advent of all-around prosperity.

German Currency Inflation Continues.

Foreign troubles are slow to dissolve. The Turkish situation is a delicate one, although it is hard to believe that a generl conflict will be precipitated. German affairs have not yet been settled and another crisis is probable when next year's reparation payments are due. Currency inflation in that country continues unabated. The volume of paper marks in circulation has increased 35 per cent in the last month and 50 per cent since the end of July.

Farm Prices Must Advance.

That industrial and trade activity can continue long with the farmer's income so much out of line with the income of other branches of society as at present is quite doubtful. The close relation between farm prosperity and general prosperity is generally recognized. Either prices for farm products must advance to a higher level or industrial activity will collapse within the next twelve months.

Successful Venture in Co-operative Livestock Marketing

SELLING FEEDERS DIRECT FROM RANGE TO FEEDLOT PROVEN SOUND PRACTICE

F. R. Lamb.

LAST year 2,000 feeder cattle were purchased in Colorado direct from the range through the agency of the Ohio Farm Bureau Federation and the Colorado State Farm Bureau. These cattle went direct to the feed lots of Ohio. This method of getting feeders direct from the range where produced to the feed lots of the corn-belt created widespread interest and this year the plan is being worked on a much wider scale and with better organization. As the principles and workings of the plan are not fully understood, a discussion of its origin and operations will be of interest to many Western Farm Life readers.

The plan of purchasing feeders direct is a decided new departure from the general plan of marketing livestock and has created unusual comment in the press of the country as well as among the livestock men and others interested in the industry. Other state farm bureaus are now watching developments with interest.

Ohio Farm Bureau Originated Plan.

The Ohio Farm Bureau Federation originated the plan and deserves the credit for the pioneer work necessary to make it a success. It was a plain case of "necessity being the mother of invention." The Ohio feeders needed cattle fresh from the range in their feed lots, for they were sustaining severe losses on account of having to take stale, unthrifty and inferior cattle such as filtered through the markets. Their operations were becoming unprofitable as a result of these conditions.

Buying feeders direct from the western ranges had been considered for some time among corn-belt feeders as a necessary remedy for the conditions indicated in the foregoing. This pioneer effort was successful in spite of the handicaps encountered and the fact that the Ohio men are here with larger orders than before shows the attitude of the feeders of the corn-belt toward Colorado cattle. The saving in price, while an important consideration, was not the controlling motive of the plan. These feeders wanted cattle that would make normal gains under normal conditions and this plan furnished them to their entire satisfaction.

Contract Feature of Plan.

The details of the plans as worked out by the Ohio Farm Bureau Federation are as follows: All orders must originate through a county livestock company or county farm bureau organization on an official contract properly executed. This contract makes ample provision for all details as to number and quality of cattle, distribution and settlement and also freight, insurance, etc. It must be approved by the buyer's local bank, who authorizes a draft for the purchase price as a part of the contract. The contract must be fully approved by the Ohio State Farm Bureau Federation and is then forwarded to its purchasing agent. The purchasing agent, who is under $25,000 bond, has sufficient authority under the contract to use his judgment in meeting the various range conditions with assurance. He, of course, is personally responsible for the quality of cattle purchased and the price paid, and must be familiar with every phase of the livestock business.

Listing Cattle for Sale.

In handling the project from the Colorado end the Colorado State Farm Bureau first obtains a list of cattle for sale in the various producing sections of the state. This list is completely detailed as to age, breed, quality of the cattle and other necessary information. In rendering this service the state office have the hearty co-operation of the Agricultural College, through its extension specialists and county agents, the local livestock associations and individual stockmen. From these lists the Ohio buyer plans his itinerary and the dealing is all direct with the producer of the cattle.

Split Saving Made.

All the dealings in connection with the purchase of the cattle are based on the assumption that it costs from 75 cents to $1 a hundred to market cattle through the usual marketing channels, including freight, yardage, feed, commission, shrink, etc. It has been demonstrated that this same expense will take the cattle direct from the pastures to the Ohio feed lot. The aim in agreeing on the purchase price is to split the first marketing cost and thus benefit the producer of the cattle as well as the Ohio feeder each to the extent of about 50 cents a hundred. Minor bargaining details enter into (Turn to Page 15)

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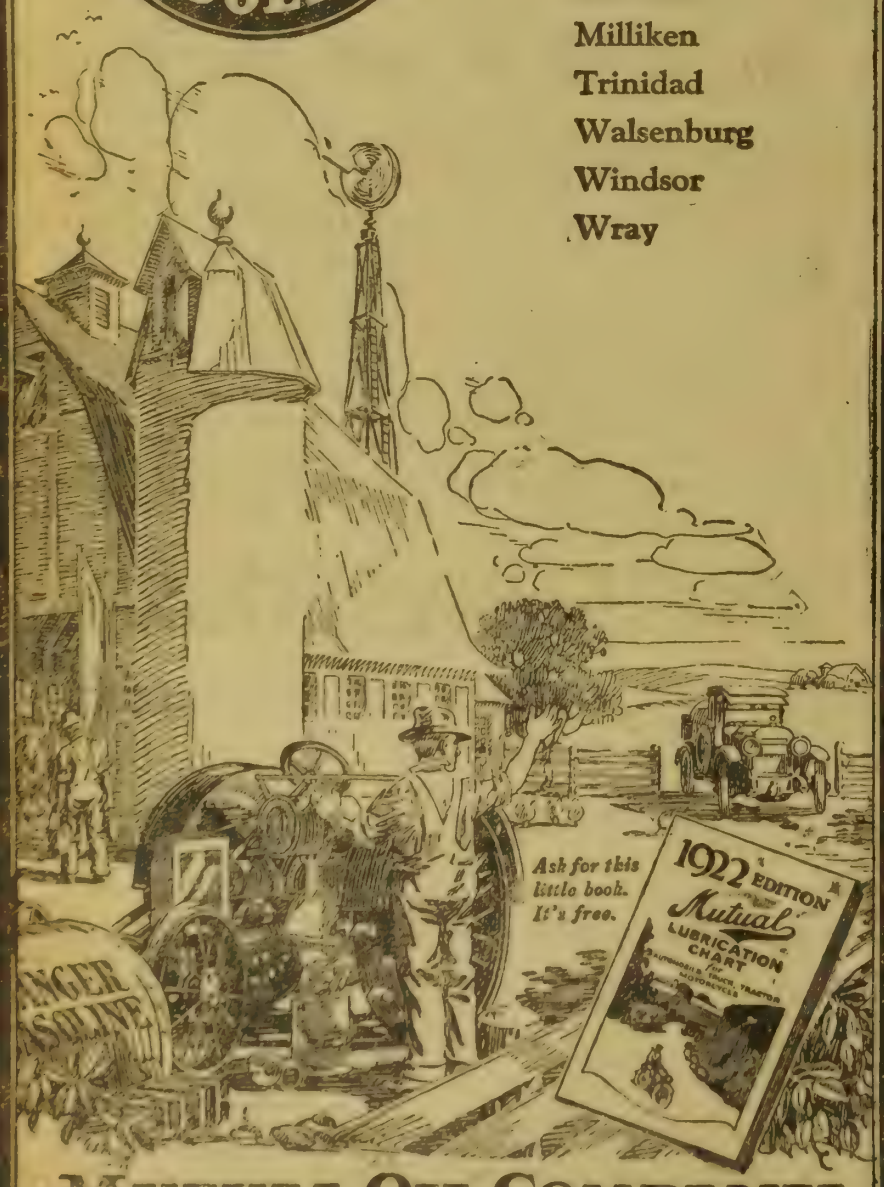

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By ALBERT PAYSON TERHUNE

A NOVEL
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CANTERING around the curves of the Auteuil byroad in France, Hugh Mallock, self-styled "an American," born in the Virginias, where his father, Sir Hugh Mallock, and his young French wife had fled to escape the injustice of Queen Elizabeth, came upon a gray little wisp of a man battling with four footpads. After his assailants had been put to flight the little man who shows no evidence of gratitude toward his rescuer whom he sharply questions as to his nationality, mounts his horse which was brought to the scene by a servant and proceeds on his journey to Malmaison. A jeweled snuff-box fell from his pocket as he galloped off, which Mallock picks up and finds has inside its lid the miniature portrait of a beautiful girl such as he had never before seen. While examining it a gentleman of France dressed in gaudy court fashion rides up and catching sight of the jeweled box, demands it as his property after telling Mallock that the girl was Mlle. Claire de Sieux, daughter of Chevalier de Sieux. Attempting by force to compel Mallock to give him the box, he is defeated, disarmed, and unhorsed in a sword duel, and after being balked in an attempt to cowardly slay his opponent with a pistol, he sullenly leaves, muttering dire threats. Determined to return the box to the fair girl whose portrait it contained, Hugh Mallock rides to the house of the Chevalier and meets the owner, who calls his daughter and tells her Mallock is the bridegroom he promised her. The girl, who has been educated in the French fashion to expect a husband to be selected for her, rebels at the thought and appeals to Mallock to save her from marrying a man against her will, pointing out that the only way is to signify to her father that she is not to his liking. Mallock, although completely enamored with the girl, indignantly denies that he has made any bargain with her father, and in a spirit of gallantry unknown to the men of France, promises he will tell her father what she asks, even though it be a lie. Just as he is telling her he had nowhere in all his wanderings ever seen a woman her equal, the door opens and her father appears.

Mallock tells him he cannot marry his daughter and only escapes from the house at the peril of his life. While hastening along the crowded thoroughfare he sees the little gray man and attempts to return the snuff-box, following him through a side door into a great house where he was instantly seized and overpowered by a guard of soldiers the moment he showed the box. Adroitly undoing the thongs with which he was bound he again makes his escape through the garden. As he fled he came upon a crowd of rowdies annoying a woman, who turns out to be the Chevalier's daughter. Sight of the snuff-box which fell from his clothing as he threw off his cloak to defend the girl caused her annoyers to instantly disperse. Claire tells him her father in his rage had turned her out from the house and that she was on her way to appeal to the great Cardinal Richelieu, her god-father, for help. The baying of blood-hounds is heard and she tells him they are used to trail escaping criminals. Realizing that he is the luckless victim they are pursuing he tries to get her to flee and let him meet them alone, but she insists on waiting with him.

CHAPTER VI.

Yankee Trick—And a French One.

I think it must have been the peril to Clair rather than my own danger that sharpened my wits. For what I did was a veritable inspiration.

Why, at that moment, my memory went back to the scene of my boyhood I cannot tell. But I seemed to see myself again thrashing an Indian lad who had played a cruel trick on my favorite hunting dog.

And on the recollection came the plan for our salvation. A plan so simple as to be laughable; yet so effective as to make me wonder I had not earlier thought of making use of it.

Opening the snuff-box, I shook out all its contents, in a line, across the narrow way. Then, calling to Claire to hasten, I ran with her around a jutting street corner into another thoroughfare.

Once out of sight, I stopped. She sought to urge me forward.

"Quick!" she cried. "They are almost on us! Hear them? They must have reached the spot where we were when we began to run."

"Not quite," I laughed. "When they reach there we will know it."

"I don't understand you! Oh, why do you wait?"

"You will understand presently. Hark!"

The baying had grown not only nearer, but had taken on a louder, more triumphant note as the hounds felt the scent grow fresher. Now, as I spoke, the deep, bell-like tones changed in a flash to a series of discordant, snorting howls of pain.

"What is it? What is it?" gasped Claire as the babel of shrill, agonized, sneeze-punctuated yelps reached us.

"It is an ounce or two of very strong snuff," I made answer, "judiciously applied to the pavement. That is all."

"Snuff! But I don't——"

"All dogs on the trail, until they actually sight their game, run with their noses close to the ground," I explained, as I drew her farther away from the indescribable hubbub. "They sniff, with all the force of their nostrils, to catch the scent of the quarry's footsteps. These bloodhounds, running thus, suddenly chanced to inhale great nostrils full of powdery, stinging stuff."

"And——"

"The inside of a dog's nostrils are the most exquisitely tender parts of his whole body. When those nostrils drew up the snuff, it strangled and burned like so much living fire. And, apart from robbing the brutes of their uncanny sense of smell, it quite took away all their interest in this particular manhunt."

"Oh, how wonderful of you!" she cried, in a genuine admiration that set me a-tingle. "Who else on earth would have devised such a thing?"

"It was not wholly of my own devising," I confessed. "When I was a boy and was teaching a rabbit dog to track hares, a young Indian thought it a fine jest to scatter a handful of pepper along the trail. 'Twas the memory of that ——"

She broke into a hysterical laugh.

"Oh, the grotesqueness of it all!" she exclaimed. "The hero and the damsel in distress be set upon by fierce monsters. What doth the hero do? Doth he draw sword and wage mighty warfare like the paladine of old? Nay! He emptieth his snuff-box and strolleth up another street!"

"I grant I am no hero," I muttered sulkily; nettled at her irony, yet realizing that the strange mirth rose from nerves strained and racked well-nigh to the breaking point. "I am but an ignorant American, whose——"

"Which 'ignorance,'" she caught me up, "has prevailed where all the strategy and bravado of a French swashbuckler would have met with dire failure. You are a strange man, sir, and unlike our Europeans. I wonder if the American race, whereof you prophesy, will be like you. Where we Europeans are bound down by tradition and chivalry and a host of outworn old-world customs, you hit upon an unspectacular, common-sense trick that wins where we would lose. Such a nation should go far!"

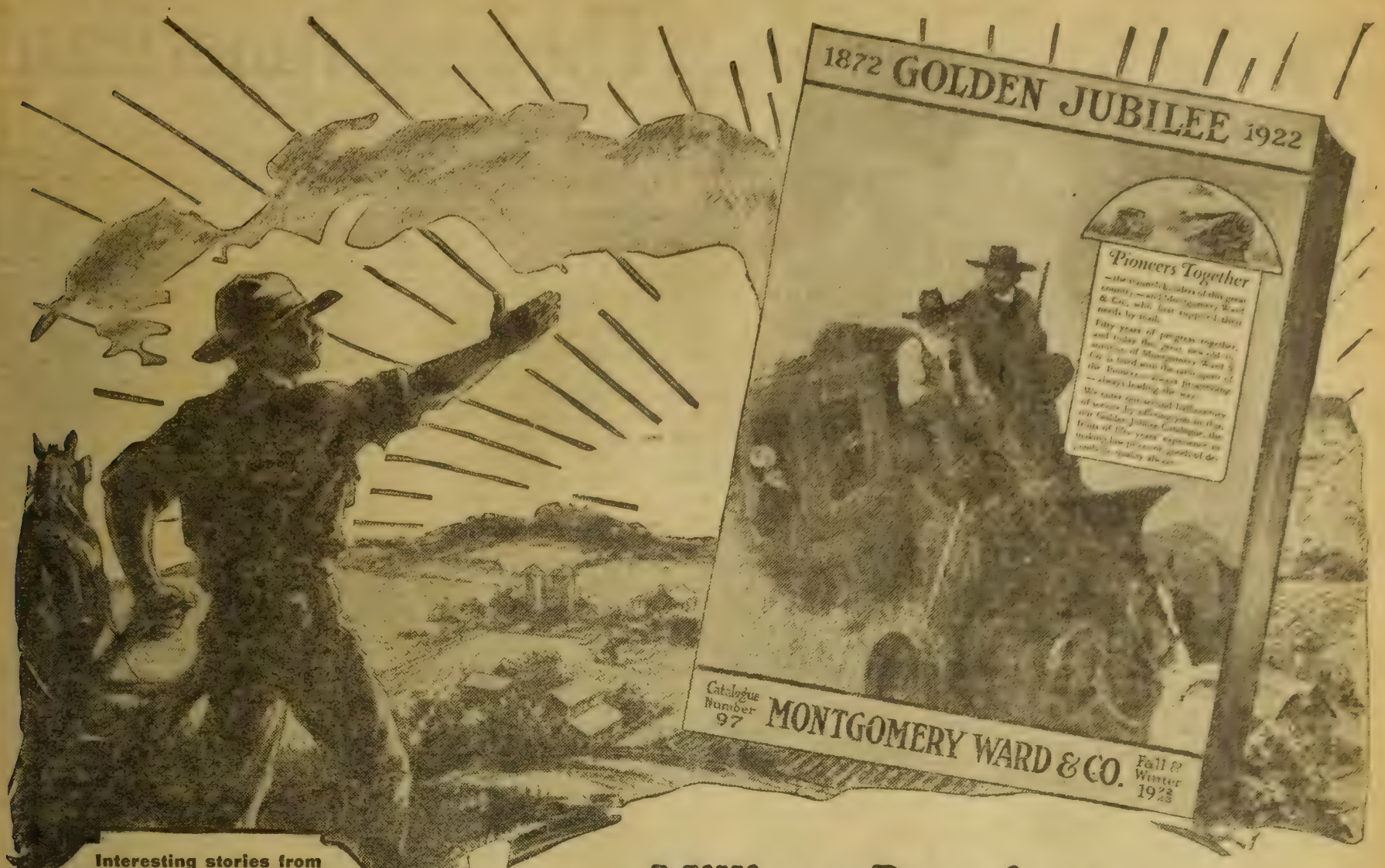
"This first representative of it," I returned lightly, to keep her from lapsing back into sorrow, "has gone now as far as the Rue St. Germain l'Auxerrois. Yonder is your father's house. See!" I added, to reassure her, for she had all at once fallen to trembling again at the sight. "The house is ablaze with lights. Doubtless your father already bitterly repents him of his rash cruelty toward you and is sending out searchers."

"You do not know him!" she repeated brokenly.

"Possibly not," I replied. "Yet I shall hope to know him better before this night is over. And unless he consents to take you back both to his house and to his heart, he may perchance live to regret my unworthy acquaintance."

We had neared the entrance to the

(Turn to Page 10.)



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The Cover Picture.

A cut of the El Paso county livestock judging team, state champions in the contest at Pueblo in which fifteen teams too part, appears on the cover page of this issue. Paul L. Smithers, assistant county agent who trained the boys in their judging work, is the young man in the center of the group. The boys are Theo. Patterson, a member of the Myron Stratton Home club, and Richard Galley and Dean Besse of the Highway Junction club. The fourth boy is Malcolm Ryan of the Myron Stratton Home club, who was alternate.

A State Pure Seed Show.

Plans are well under way for the holding of a Colorado pure seed show. This is a movement well worthy of the support of farmers of the state. Seed of known purity and of varities adapted to the conditions under which the crop must be grown is a most important factor in production. Every year serious losses follow the planting of inferior seed. The seed specialist with his breeding plots and experimental plantings of new and untried varieties is filling a real need in agricultural progress and the methods of the seed specialist must of necessity be followed to a greater or less extent by all growers of high-class products.

The seed show idea has been growing in various parts of the state and the project has developed to the stage of action. W. S. Buck, a prominent member of the El Paso county farm bureau, has been named as the superintendent of the proposed show and a tentative premium list has been prepared. It is proposed to use $130 in cash awards for county seed exhibits and $350 for individual exhibits. A number of seed companies and other interested organizations will probably offer trophies of various kinds.

Making a show of this kind distinctly educational in character adds to its value. A special program of meetings for growers of seed during the show will be arranged for by Waldo Kidder, extension agronomist of the Colorado Agricultural College, where problems of marketing and production will be discussed. The final exhibitions and contests of the boys' and girls' corn clubs of the state are to be held in connection with the seed show, in charge of W. R. Freeman, Assistant State Club Leader. From fifty to a hundred corn club exhibits will be on display in competition for the state prizes.

The show is to be held in the Palm Gardens at Colorado Springs and the local chamber of commerce is backing the project financially. The extension department of the Colorado Agricultural College and the county agents over the state are actively co-operating in making this first seed show a success. It is likely that a state pure seed growers' association will be organized before the exposition closes. The date set is November 14 to 18.

Ellis Howell of Montrose and James Morrison, county agent of Logan county, are to have charge of Colorado's exhibits at the International Hay and Grain show in Chicago, and both plan to be at the state Pure Seed show for the purpose of selecting the best available exhibits to go to Chicago.

This show can easily be made one of the finest expositions of its kind in the country and will be an important factor in advancing the agriculture of the state and bring to the attention of the surrounding states the quality of the seed produced by up-to-date growers. Watch for later announcements and be prepared to do your part in making this exposition a success.

Farmers and Politics.

Taking part in party politics is not on the program of Western Farm Life, but we would urge our readers to be up and alive to their interests as affected by the men elected to public office. By this we do not mean that we believe farming as an industry can be built up at the expense of some other industry and that farmers are justified in fighting in politics for candidates and policies which cater to class interests. Statesmen in the true sense of the word are coming more and more to realize that in a republic such as ours there is no place for a prosperity which is built on the misfortune of some class or industry. Agriculture, however, is the basic industry and those engaged in it are justified in making any fight necessary to secure recognition of this fact, not only for their own welfare, but in the interests of all. It requires broad-minded, clear thinking to work out thoroughly equitable policies in these days of complex business relations, but farmers generally can be given credit for thinking more clearly than workers in city industries. The two dominant parties in Colorado have purchased space in the advertising columns of Western Farm Life in which to discuss the questions at issue in the present campaign. We would commend a careful reading of what they have to say. Do not permit yourself to vote ignorantly when candidates and parties are giving you the opportunity to learn how they stand and to think through for yourselves the programs laid down as the basis of their claims for support at the polls.

Conserving Winter Moisture.

Moisture in the form of snow, if it can be held where needed the following season and stored in the subsoil, is just as valuable for crop production as rainfall coming at opportune times while the crop is growing. In plains farming success often comes largely as a result of making available for crop production the precipitation of a whole year instead of depending on seasonable rains which often do not come. Mr. Parsons has reiterated this principle in Western Farm Life over and over again and in this issue discusses some of the things which should be done on the plains farm during the fall and winter in order to get the largest possible return from the available moisture.

Fall plowing and the practice of such methods as will hold winter moisture are cardinal principles in preparing for spring crops on the plains farm. To the farmer who looks ahead, a field which has been thrown up in ridges with a lister, every furrow full of snow from a winter storm, presents great possibilities as compared with one left smooth and which shows perfectly bare of snow. The snow in the furrows means water stored in the soil for the use of the crop. Many growers of feed crops on the plains find that it makes the difference between a sure and paying crop and possible failure to hold the snow on the fields and get the moisture into the soil. Fall and winter listing as a regular practice is increasing.

Beans Making Good.

As a result of rushing into bean-growing as the one paying crop many farmers crossed the bean off the list when the price went so low as to return no profit. Beans are a good crop for many conditions and farmers who took pains to properly prepare the soil and put out a reasonable acreage are very well satisfied with the returns. We note in a news item from Weld county that 1,200 bushels of beans had been threshed from a 150-acre field, returning at prevailing prices for the crop $24 an acre. Similar items are being printed all over the plains farming sections of the state. We attempted to point out the desirability of planting reasonable acreage of beans in well-prepared soil last spring, not with the idea that any big money would be made, but because conditions indicated a fair price and the crop is one that can be depended on with some degree of certainty. The acreage in Colorado did show a marked increase over that of the year preceding and the crop is making a little profit for those who planted their beans in well prepared soil and gave them proper cultivation.

Colorado Wheat Wins at Wichita.

Colorado exhibitors have again made creditable winnings at the International Wheat Show, at Wichita, Kan. Only two Colorado men, John Howell of Montrose and John Skinner of Fruita, had exhibits entered, and both were among the winners. Skinner took first on Blackhull Turkey wheat, and Howell second on Marquis wheat, fourth on best bushel of wheat of any variety grown anywhere in the world, and first on calico corn. Mr. Howell and James Morrison, county agent of Logan county, will represent the Colorado Board of Immigration in handling the state's entries at the International Hay and Grain show held in Chicago in connection with the International Livestock Exposition early in December.

Better Club Buildings at Fair.

No better investment could be made by the board of State Fair managers than the erection on the fair grounds at Pueblo of a strictly modern boys' and girls' club building. The club encampment is one of the most vital things in evidence at the State Fair. These 400 boys and girls crowded into the rough temporary structures provided at the fair this year represent the total club membership of 15,000 in forty-eight of the state's sixty-three counties. This is said to be the largest proportionate club membership of any state in the Union. These youngsters will be running this state a few years hence and the spirit of progress which they imbibe in connection with such an event as the state club encampment at the State Fair will be worked out in their lives. Should they not be housed as comfortably and as appropriately as the livestock on the fair grounds?

The Passing of Enos Mills.

Enos A. Mills, who died recently, was one of Colorado's distinguished citizens. His death is a loss to the whole nation. He was a noted naturalist and a most unusual man. He came to Colorado from eastern Kansas, where he was born, when 14 years old, in search of health. He got a job in a little hotel in Estes Park for the summer and for several seasons acted as a guide to tourists. His health improved and he made many trips to the top of Long's Peak. He was a great lover of nature and fought to keep our playgrounds free. He insisted that no man had any right to a monopoly of those things which God had given to everybody. He denounced trusts and combines and unfair privileges in any form. In his numerous trips to Washington his eloquence and vigor did much to influence the policy adopted in the preservation of our mountain parks. His inn near the base of Long's Peak became a favorite resort of tourists. Through his many books dealing with animal life and nature subjects his influence will continue in the years to come.

One Thousand Colorado Children Saved.

The use of diphtheria antitoxin saves a thousand children a year in Colorado, according to a statement made by the Colorado Association for the Protection of Public Health. The use of antitoxin was introduced in 1895 and the death rate immediately fell, representing a saving of 250 children in Denver alone. This result of administering antitoxin prepared by using animals is something to remember when voting on the initiated anti-medical bill which will appear on the ballots this fall. If this bill passes antitoxin could not legally be made in Colorado.

To be effective the antitoxin must be used early. If used the first day of the disease the saving of life is practically certain. The Boston City Hospital has a record of 500 doctors, nurses and ward attendants treated at the first appearance of the disease, and not a single life was lost in this large series of cases. This hospital claims that it saved 14,000 lives with antitoxin, most of the patients being little children.

State Farm Bureau Making Progress.

Conejos county in the San Luis valley is the latest accession to the farm bureau organization. A permanent organization was recently perfected and already committees are at work on taxation, a wool pool, livestock marketing, drainage, better sires, potato marketing, boys 'and girls' clubs, freight rates, weed extermination, pest control, publicity and membership. A representative group of the leading farmers of the county are determined to make the work a success. The county agent, F. L. Cooper, will receive the best of co-operation in carrying out the extension work he has planned. The fine spirit of co-operation shown in this new farm bureau county is partly due to the example set by the adjoining counties of Saguache and Rio Grande.

From the Nation's Capital

BETTER MARKETING FACILITIES BEING ENCOURAGED TO IMPROVE AGRICULTURAL SITUATION.

E. E. Reynolds.

INDUSTRIAL unrest and business uncertainty have given way to a feeling of confidence, not a high degree of optimism, but the belief that the country is financially sound and that better times are ahead. This change in public sentiment is due in large measure to the psychological effect of the settlement of the rail and coal strikes, to the signing of the so-called permanent tariff, and to the vetoing of the bonus by President Harding.

From whatever viewpoint we may look upon the tariff and bonus, whether in favor or in opposition, it is recognized, at least in the East, that the settlement of these questions, for the time being, has had a quieting and salutary effect upon all lines of business. These are the conclusions of the writer, after having interviewed well-informed, conservative men in Washington, who have nation-wide connections and keep in close touch on the public pulse.

One veteran publicist marvels that this country should be in as satisfactory condition as it is today, considering the deplorable situation of Great Britain and the nations of Continental Europe.

Our money is worth one hundred cents on the dollar anywhere on earth, in striking comparison with the extremely low values of the marks of Germany, francs of France and lire of Italy. Our credit is gilt-edge. Our country is solvent. The business situation is sound, with few bankruptcy cases compared with other periods of after-war reconstruction and readjustment. Labor is fully employed.

—x—

Agricultural Situation Not Improving.—The one big cloud on the horizon is the agricultural situation. It is bad, and not getting any better, according to Department of Agriculture investigators.

The purchasing power of farm products is shrinking. Figures summarized by the Bureau of Agricultural Economics substantiate the assertion of National Grange Master Sherman J. Lowell, that "the purchasing power of the farmers' produce is less today than it ever has been." Figures prepared at the National Grange office, for September, show that corn, wheat, oats, barley, hay and potatoes, the big money crops, are at or below pre-war level. Beef and pork are rapidly approaching the pre-war line. The three major products above the pre-war line are cotton, wool and butter. With the signing of the tariff the wool markets at eastern points began to show a firmer tendency, by October 1, with some slight advance on the lower grades.

The unfavorable agricultural situation is a serious disappointment to farmers, who cannot see the justice of having to pay war-time prices for everything they have to buy, while farm prices are down to or below the pre-war levels.

The reaction of the present situation upon the public mind in the agricultural sections varies according to the locality. In the eastern states the farmers are standing by their representatives in Congress, having confidence in the belief that somehow or other the new tariff law may improve conditions. Some farmers in New York state are inclined to blame the strike and labor troubles for the low prices and lack of demand for farm products.

—x—

Department of Agriculture Striving to Relieve Situation.—The United States Department of Agriculture is being criticized on the grounds that it is not as fully informed as to the real agricultural situation as it might be. This criticism, however, is not justified by the facts.

Reports from every part of the nation are coming in from the large number of field service men telling of actual conditions on the farms. In addition, many men in the department own farms and are having the same difficulties in marketing their crops as are the men out on the farms.

Realizing the truth of the situation, however, and proposing an effective emergency remedy are two different propositions. The men in the department who know the situation are making strenuous efforts to secure a remedy that will aid the folks back on the farms.

The department is centering its main activities at this time upon the marketing end of the farming business. Every possible means is being utilized to develop methods and practices that will reduce the cost of distribution, and return to the producer a larger share of the consumer's dollar. The market news service is being rapidly extended to both terminal and shipping points. Everything that is possible to be done is being done to insure the producer and consumer a fair deal.

Bonded warehouses, stock yards control, co-operative marketing projects and better credit facilities to facilitate more orderly marketing are being encouraged by the department to aid the farmer to receive more satisfactory returns for his investment and labor.

—x—

Permanent Rural Credit System Important Step.—A system of rural credits which will enable the farmer to finance his livestock and crop operations at a reasonable rate of interest is believed to be one very important step toward relieving the farmer and stock raisers. A nation-wide conference of co-operative marketing associations has been called to be held in Washington at an early date at the suggestion of Senator Capper, for the purpose of securing united action upon rural credit legislation and recommending it to Congress. The conference will be a gathering of representatives of all the leading co-operative marketing groups in the country.

In a letter to Aaron Sapiro, who is general counsel for a large number of marketing organizations, Senator Capper said: "The next agricultural credits bill passed by Congress should be and doubtless will be of a permanent character, and should be of such a nature as to close the books on this subject for many years to come. I have been greatly impressed by the fact that the greatest use that has been made of government credit agencies in aid of the farmer has been made through co-operative marketing organizations, and that these credits, as made, have been entirely satisfactory, both to the farmers through their organizations, and to the government.

"Extensive as is the membership of these organizations, at this time, I am convinced that the co-operative marketing movement is still in its infancy, and it is sweeping the nation so rapidly that the best possible way to facilitate and handle rural credits for the purpose of orderly marketing of crops will very evidently be through the co-operatives."

—x—

National Milk Producers Advocate Pooling Milk.—Pooling of market milk wil be the outstanding question for discussion at the annual meeting of the National Milk Producers' Federation in Springfield, Mass., November 9 and 10. Milk transportation will also be an important topic. Last spring the federation representatives made an effort to get the railroads and the Interstate Commerce Commission to lower the rates on milk. As milk rates are classed with passenger rates, no reduction was in sight, and as a result the federation has made an investigation of cost of truck transportation, figuring it was feasible to transport milk 50 to 75 miles by truck. In co-operation with the truck committee of the International Chamber of Commerce, a study of costs has been made in California and several other states. A summary of these investigations will be presented at the annual meeting.

Copying after the glass-lined milk cars on the railroads, the truck people are building glass-lined tanks and motor trucks to handle milk.

Corn Shredding—and Goodyear Belts

Alex Woelffer, of Watertown, Wisconsin, says the only belt he ever used that really held the pulleys and ran trouble-free is the Goodyear Klingtite Belt. "Even during and after rains, it delivers without a miss," he says. "There is never any tension to endanger the engine through overheating; never any re-setting. It does not stretch, shrink or stiffen.

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Goodyear Klingtite Belts put an end to farm belt troubles. They need no breaking in. They require no belt dressing. They do not separate at the plies. Goodyear means good wear.

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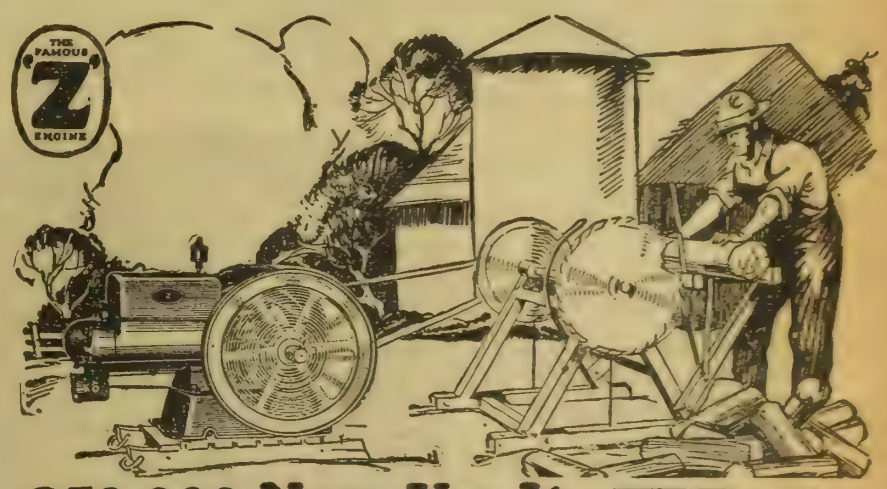

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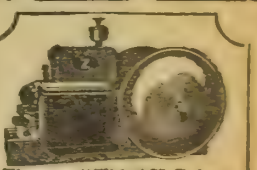

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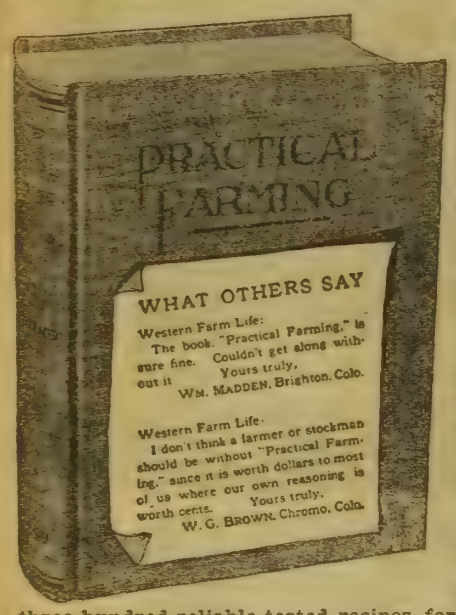

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TRACTOR LUBRICATION

The First American.

(Continued from Page 6).

garden. I broke off in my reassurance as a tall man, clad like a courtier, strode angrily down the walk toward the street. His face, visible in the candle-light, was convulsed and pallid. Yet at first glance I recognized him.

He was the stranger who, on the Auteuil road that day, had demanded of me the snuff-box and with whom I had been forced to fight before I could pursue my way to Paris. What did he at the Chevalier de Sieux's mansion and why was he leaving it in such a state of temper?

The man glanced toward us as we stood there watching him. Claire had drawn the hood over her face again, and was a yard or so away from me, among the shadows of the shrubbery. I do not think he saw her. I know he did not recognize her.

But he saw and recognized me on the moment. Checking his advance, he paused as if irresolute. Then, to my utter amazement, he drew sword and ran at me, shouting as he ran:

"Watch, ho! Watch! A rescue!"

What his words meant I could not fathom. But it was very apparent that he was bearing down upon me with flourished sword, and that, unless I would fain be spitted like a plover, I must defend myself.

I drew my blade barely in time to parry his first lunge.

Was the man mad, that he should wantonly attack an opponent who had proved himself so easily his master at swordsmanship? I ought to have been accustomed to incomprehensible things by that time, but this onslaught frankly perplexed me.

He did not attack with fury, as he had done that day, but fought cautiously after that first thrust, keeping back out of reach, taking no chances. He did not press me, but contented himself with clashing his blade against mine, and ever bawling at top voice:

"Watch, ho! Watch!"

Shutters were flung back on either side of the street. Folk ran up to see the brawl. From the Chevalier de Sieux's house issued a dozen manservants, while every window was alive with women's heads.

And in the midst of the confusion up panted a company of the city watch, bearing lanterns, pikes and blunderbusses.

My father had ever taught me to respect the law. Therefore, when the watch-captain bellowed, "Hold! In the king's name!" I dropped my sword-point and stepped back.

Nor did I offer resistance as several of them seized and disarmed me.

Others secured my antagonist, who seemed to take their interference not only calmly, but even gladly. The watch-captain pushed forward and was about to speak, when my opponent said:

"Do you know me?"

He spoke with an air of haughty authority. The captain gazed at him, then raised his hand to the salute.

"Yes, monsiuer le marquis," he returned, "I have the honor to recognize your excellency."

"Then," went on the stranger, "you know me for an official of his majesty's court. You will therefore obey my instructions now, unless you desire to lose your commission. I order you to arrest this brawler," pointing at me, "on my charge of breaking the king's peace and of disobeying his eminence the cardinal's righteous edict against dueling."

"Dueling?" I cried. "Why, it was you who——"

"Silence, there!" the captain interrupted me. "You can state your case to the magistrates in due time. In the meantime, do not interrupt M. le Marquis des Ems. Pray, proceed, monsieur le marquis."

"I was leaving the house of the Chevalier de Sieux," went on the marquis, "when this ruffianly fellow set upon me. I reminded him that his eminence, in his great wisdom, had decreed death as the penalty for duels. But he would not listen, and assailed me so violently that I was forced to draw sword in self-defense. Thse people," turning to onlookers, "will bear me witness that I struck no blow, but fought solely to guard my life, and that I shouted right lustily for the watch to come to the rescue."

"Aye, aye! That is so. It is as he says," spoke up a number of bystanders.

"It is a lie!" I declared. "He——"

"Is the word of an unknown brawler in torn old clothes to be taken against that of the Marquis des Ems?" snapped the watch. "Fall in, men! March him to the Bastile. Tomorrow he can have his say before a magistrate."

His subserviency to my foe led me to believe the marquis must be a man high in the court whom no mere watch-captain dare offend. Of what use could be any protestation of mine?

I saw the whole trick. But how could I, an unknown stranger, expect to make others see it?

My torn, rumpled clothing, too, was against me. I had thrown aside the emblazoned cloak as Des Ems had attacked me. Some pickpocket in the gathering crowd had evidently snatched it. So, in disheveled, hopeless, helpless state I stood; disarmed, in custody, denied a hearing.

Of a sudden my mind left my own concerns and flashed back to Claire. I glanced keenly about me. She had vanished. Though I rejoiced that she had been spared the publicity of appearing in such a scene, yet I felt a vague pain at heart that she—the only witness whose testimony could disapprove the marquis' charge—had deserted me in my moment of dire need.

At the captain's order one of the watch began searching me for concealed weapons. As he drew out the snuff-box, the marquis snatched it from his hand.

"This is my property," he said, "and I can prove it before the magistrates tomorrow. In the meantime, I will keep it. I am responsible if you are blamed for its loss, captain."

"What is all this?" boomed a truculent voice.

The Chevalier de Sieux was elbowing his way through the crowd toward us.

"Is the city so ill-patrolled," he growled, "that peaceful folk in the very heart of Paris are to be awakened by brawls and by the monkey-chatter of the city watch?"

His eyes fell on Des Ems, and he seemed about to speak again, when I thrust myself forward, dragging my two guards with me.

"Monsieur le chevalier," I cried, "I have escorted Mlle. Claire back to the house from which you drove her. If you refuse to take her in and to treat her in all ways as a father should treat his child, I shall return when I am free, and ——"

"When you are free?" scoffed Des Ems. "You are new to Paris, or you would understand that one does not get free when once the cardinal catches him dueling. I——"

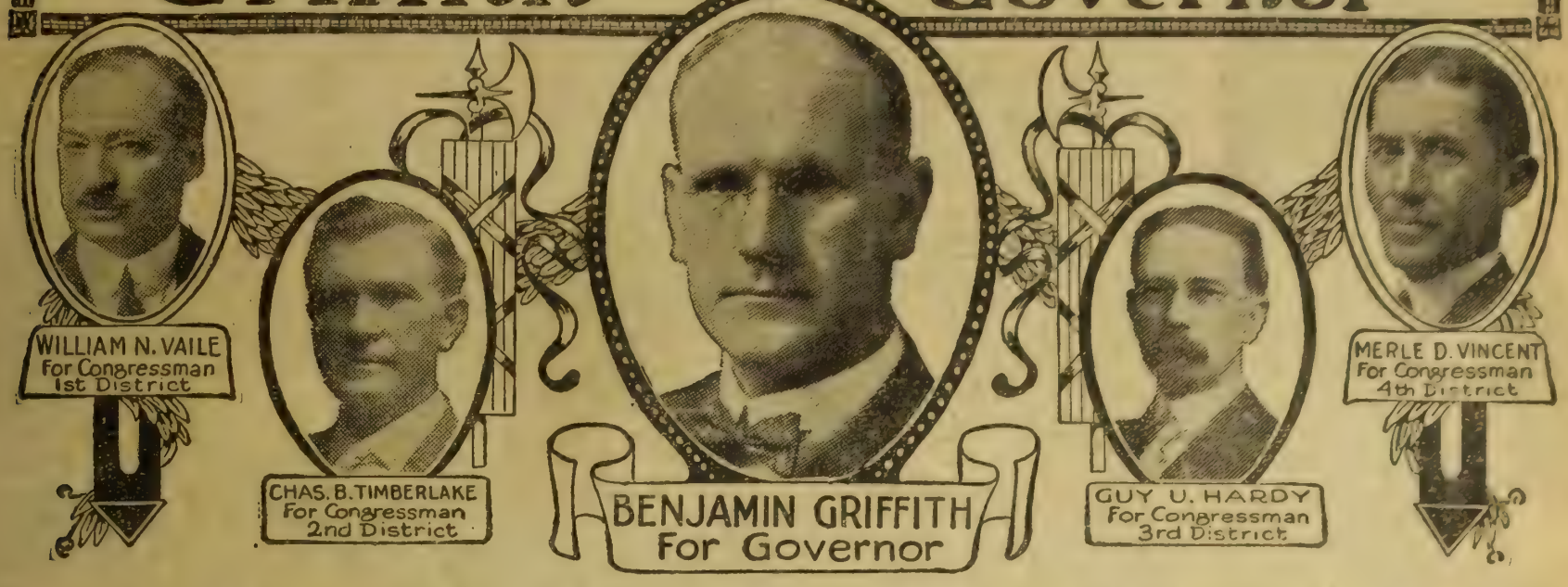
"Chevalier!" I cried again, as my captors drew me back. "Your daughter ——"

"I have no daughter!" thundered the raging old man.

"You blackguard!" I almost screamed. "I——"

(POLITICAL ADVERTISEMENT.)

Keep Peace in Colorado- Griffith for Governor



How the Republican Party Has Helped Colorado Farmers

When the Colorado farmer votes Nov. 7 he is doing more than choosing a governor. He is voting either for a square deal for himself and family or against it.

The Democratic party ruined the farmer by restricting credit in 1920 and forcing him to sell his crops at a loss. Then it admitted cheap foreign products and forced prices so low that many farmers were driven out of business.

When the Republican party came into power one of the first acts was the Farmers' Tariff, which sent the price of farm products up immediately. Next it passed six measures which started the farmer back toward prosperity, including the Billion Dollar War Finance Fund for Farmers' Relief.

Under the Republican administration in Colorado the state has loaned $1,000,000 to farmers. Under Benjamin Griffith, Republican nominee for Governor, farm and livestock interests are assured of continued fair and generous dealing.

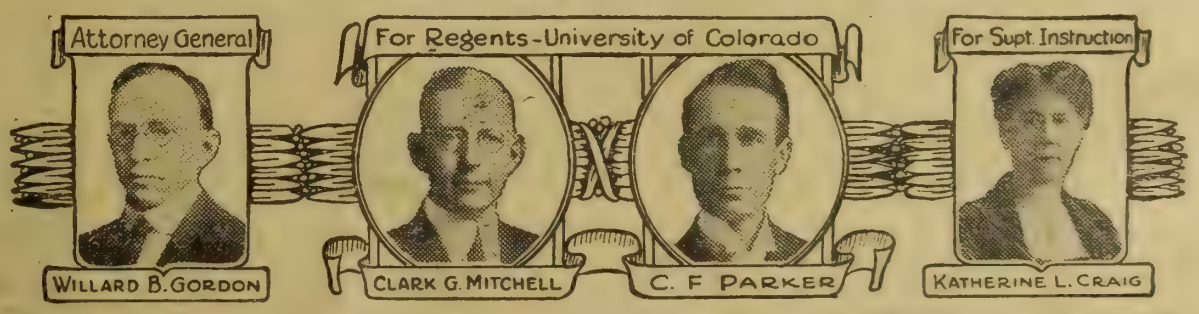
The Democrats seek to cover up their unfair treatment of the farmer by a visionary state warehouse scheme that can't be put into effect for years to come. The Republicans favor lending farmers money to build their own warehouses.

The difference to the farmers of Colorado between the promises and acts of the Democratic party and the promises and acts of the Republican party is the difference that lies between the Socialism and charity promised by the Democrats and the practical assistance and ability to help themselves that the farmers are ASSURED by the Republicans.

A vote for Sweet is a vote for low market prices and ruin for farmers. A vote for Griffith is a vote for a square deal and prosperous farms.

REGISTER AND VOTE

The Entire REPUBLICAN Ticket



"Silence!" ordered the captain. "Unless you wish to be gagged. March, men! Forward!"

They fell in at either side of me. And we began our journey to the prison whose dread fame had even reached my wilderness home—the Bastile.

CHAPTER VII.

The Bastile.

Abler pens than mine have described the Bastile. And yet, as one who has lain there, I believe none of them have done even meager justice to its horrors and gloom. I shall not, then, try to cope with my betters by seeking to portray it. And, faith, I am glad to be free of the task. For the very memory of the darksome place is one of dread.

I am not superstitious. Yet, as a turnkey marched me down a damp corridor and thrust me into a cell, it seemed to me that the ghosts of the place's victims and the spirits of its myriad atrocities made the whole prison vibrant with a dread atmosphere of their own.

Here were caged low scoundrels and high nobles; men who had wrongfully plotted to mount France's throne, and men who had crossed swords with each other in sudden anger—"all sorts and conditions of men," as the Book of Common Prayer has it. And, in the silence of the night, I could hear stifled sobs, and deep, hopeless groans rising here and there through the deep, echoing darkness.

So full was the vast prison at the time that I had not even a cell to myself. I was cast into one already occupied. Its other inmate—a slender, long-haired lad, scarce 20 years old, and decked out in tarnished finery—rose with languid grace to accost me.

"Welcome to the hospitality of Mme. la Bastile," he said, with a bow. "Her guest-rooms are restricted in size, but they are of excellent workmanship. So strong that no thief has ever been known to break in."

His gay, graceful manner touched me. If he could be cheerful here, I was not minded to degrade myself in his laughing eyes by seeming to mope. So I made shift to answer:

"I am at least grateful for so pleasant a roommate during my stay in madame's hospitable home. I already believe we shall get on so well together, you and I, that neither of us will be able to bring himself to depart from here of his own accord."

"Well spoken!" he applauded my feeble wit. "I feared I was to have some weeping coward for my companion. I congratulate myself! Therefore I will begin all over again, and beg leave to make myself known to you in due form. Monsieur, I am Amandee Jean Baptiste de Fraix de Portlon, Sieur de Montivre of Gascony—wholly at your service."

"May your life be as long as your name!!" I returned.

"Ceil!" he laughed. "Would you make me a centenarian? We of Gascony are as strong for names as we be weak for ready cash. From your own accent, I judge you, too, are of the provinces?"

"Pardon my carelessness in neglecting to introduce myself," I hastened to say. "Monsieur, you see before you a man whose name is as short as your own is long. I am Hugh Mallock of—"

"English, eh? Yet the accent is not——"

"No. American. Lord of so much of a mostly undiscovered continent as I may choose to claim. At present a visitor in Paris, until such time as it shall please the executioner to start me for a new destination."

"American?" he repeated. "The term is new to me. You speak of executioners. Do I conclude you have tried to slay the cardinal, to outdress the king, or to send love-sonnets to the queen?"

"Nothing so romantic or adventurous, I fear. I merely sought to make sweet music by clicking one bit of steel against another."

"Dueling?" he cried. "That, perchance put you in worse peril than any of the three more picturesque crimes I suggested. The edict leaves scant leeway. Still, he added more cheerily, "a pardon is not unheard of if a man be of influence. What is your party?"

"My party!" I echoed, not understanding.

"Yes. Of what party are you?"

"I do not understand. You see I am this day new arrived in Paris. I have no friends here. And news of your 'parties' or 'factions' has not crossed the seas to my ears."

He whistled long and low, eyeing me in open wonder.

"That a man should live," quoth he, "who does not understand the politics that are convulsing France! Here, in Paris, it seems to us there can nowhere be other topics of talk."

"Would you mind explaining?" I asked, "for, though I seem likely to have short enough time to live here, yet I am ever desirous of learning what is interesting in each place. I know, of course, that Louis XIII, son of the great Henry of Navarre, is your king. Also that Cardinal Richelieu is his prime minister and that Anne of Austria is queen of France. Beyond those simple facts, my knowledge lags."

(Turn to Page 20.)

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Where to Ship Furs.

The shipper for his own protection should make sure of the honesty and ability of the house to which he sends his furs.

Once in a while the honest and capable fur house receives a complaint from a shipper about the grading his furs were given. Then the matter is simply a difference in the judgment of the fur concern's grader and the judgment of the shipper. A trapper who has been years at the trapping game is a pretty good judge of the quality and grade of any fur he catches and usually has his own ideas of what every pelt should bring. As a general rule, his judgment is good.

On some skins, however, the expert grader, by reason of his more complete and scientific knowledge of grading furs, often detects hidden value which the trapper did not see, and the result is the trapper gets a higher price than he expected. Sometimes the reverse is true; a pelt may look better and grade better to the trapper than it really should grade, and the expert can only place it at its true value. The mistake in such instances is made by the trapper.

Often a shipper's judgment is influenced by friends and fellow trappers in his locality who look over his catch and tell him offhand what it should bring. Grading furs is not guess-work; only expert examination can disclose the true value of the raw furs. If the shipper will remember that the expert grader in the large responsible fur house is a specialist in his work, he will realize why sometimes his own grading of his furs is not exactly correct.

Furs are valuable; it pays to safeguard them. It is always advisable to ship to a house of known responsibility and age. Investigate before sending your furs to market. In case of doubt, ship to the concern whose record over a period of years is known to your neighbors.

Well-Balanced Showing of Farm Products at Pueblo.

(Continued from Page 3.)

intendent of transportation to and from trains and the various adult leaders in charge of groups of boys and girls deserve great credit for the smoothness with which the whole program moved to its final conclusion. To the ordinary observer there was not a hitch from beginning to end, which bespeaks most careful planning and good head work on the part of these leaders in advance of the gathering.

Kit Carson County Girls Win.

Probably the most exciting event of the week in the club department was the series of demonstrations in the inter-state canning club contest in which competition was open to seven states. The winners were two Kit Carson county girls, Bertha Boger and Elaine Hendricks. They will now go to Chicago to compete in a national contest. In our next issue will appear a report of this inter-state contest in more detail.

State championships were awarded in all classes of boys' and girls' club work except the corn club championship, which is carried over to the National Western Stock Show, held in Denver in January each year.

The winners were announced just as the boys and girls were packing up for the trip home. In canning the Montrose county club won first; Conejos, second, and Denver third. In clothing, Weld county won first, Montrose second, and Mesa third. Saguache won first in baking, Weld second, and Montrose third. In poultry Saguache was first, Weld second, and Montrose third. The Montrose county team was declared the grand champion team of the state and will be entitled to compete in the tri-state contest at the National Western Stock Show at Denver next January for the championship of Colorado, Wyoming and New Mexico.

One of the exciting contests in the club department was in the pig club show. Most of the pigs were housed in a separate building, although some of the pig club exhibitors had entries in the regular open classifications and made very creditable showings.

Boys and Girls Show Pigs.

From various sections of the state where pig clubs had been conducted and local awards made, came the contestants for state honors. The showing went through by breeds first. In the Chester Whites, Millard and Floyd Ball won first and second, respectively, in the second year contest. There were no entries in the first year work for this breed.

The keenest competition in the pig club show developed in the Duroc Jersey and Poland China classifications. In showing Duroc Jersey pigs in the first-year group, Raymond Hawkins of Peetz, Colo., won first without competition. In the sows, Kemper Sackman of Pueblo won first, Roland Sackman, his brother, second, and Frances Ratcliffe of Range View Stock Farm, Henderson, Colo., third. In the second-year group, Junius Forsburg of Fort Collins won first on his boar pig, Ross Crow of Rocky Ford, second, and his brother, Fred Crow, third. In the sow pig class, Theo. Reiser of Fort Collins won first, and Ross and Fred Crow, second and third, respectively. The final award was the champion of the breed, first prize winners in all classes competing. Kemper Sackman's sow pig was declared the breed champion by the judge.

In showing Poland China sow pigs in the classification for first year work, the Longmont pig club cleaned up all the prizes, first going to Vernon Howlett, second to Donald Kelly, third to Theodore Howlett, and fourth to Delbert Boice. In the second year showing of boar pigs, Alden Hill of La Porte, Larimer county, won first, and Ellis Johnson of Fort Morgan, second. In showing sow pigs the places were just reversed, Ellis Johnson winning first and Alden Hill second. The judge declared the sow pig shown by Ellis Johnson champion of the breed. This boy is developing into a most successful hog breeder. In all he raised forty-five head last year and his name appeared among the exhibitors in the regular open classifications.

Pig Championship to Morgan County.

The Hampshire pigs were scarce in the pig club competition. Theodore Herman of Mesita, was awarded first place on a sow pig and also championship for the breed. The final show was the awarding of the championship for all breeds. This brought together the four breed champions. This premier honor of the pig club show went to Ellis Johnson. A number of special prizes were distributed to pig club winners. Kemper Sackman of Pueblo won the boar service valued at $100, offered by W. L. Stone & Son. Junius Forsburg won the book, entitled "History of the Durocs," offered by the Duroc Jersey bulletin, for the one showing the best boar pig of the breed, and Raymond Hawkins won the "Handy Herd Register" offered as a second prize. A copy of "History of the Durocs" went to Kemper Sackman for showing the best Duroc Jersey sow pig, and Ross Crow won a "Handy Herd Register" offered for second place. As specials in the Poland China section, the Swine World offered a copy of the book, entitled "Hogology," for the best boar pig, and a "Handy Herd Register" went to Ellis Johnson for second. Ellis won a copy of "Hogology" on his sow pig and Vernon Howlett a "Handy Herd Register" for second sow pig. Ellis also won a subscription to the Swine World. He also won the special prize offered to the state pig club champion by Armour & Co., of Chicago, consisting of $100 to be used as expenses on a trip to the International Livestock Show held in Chicago, the last of November.

The calf club showing was rather small. Edwin and Arthur Ridmour of Rye, won first and second on Jersey calves. D. A. Jay, livestock specialist of the Extension Service, Colorado Agricultural College, supervised all the club livestock exhibits.

Girl Wins Showing Contest.

Knowing how to fit and show the animals is an art in itself and pig club members were offered an opportunity to compete in showing pigs in the ring. In placing this award the judge gave careful consideration to the fitting of the pig itself and the manner in which the exhibitor handled the animal in the ring in order that its good points be presented in the best manner possible. This was a very interesting contest and resulted in Frances Ratcliffe of Henderson winning first, the prize being a sterling silver medal. Ellis Johnson won second and a bronze medal. A bronze medal was awarded to Hollis Woodgard also for a third place.

In the stock judging contest in which fifteen county teams took part the El Paso county boys won first place. A detailed report of this contest appears on another page of this issue. The winners will enter a contest of the Rocky Mountain district at the National Western Stock Show in January. The winners in the state contest may get to go to Chicago to compete in a national contest at the International Livestock Exposition.

Big Show of Herefords.

Exceeding in numbers and quality any previous exhibit of Herefords here, the cattle from the Denver Hereford circle comprised the main attraction in the new and spacious livestock pavilion. The Ken Caryl herd of Littleton, Colo., on its way home from a number of eastern conquests, came to the fore and carried off championship honors on both females and males, with the well known Largent cow, France Lassie, and the thick-set superbly fitted Marcas Fairfax by Perfection Fairfax. The herd of J. D. Canary of Littleton, Colo., made its initial bow of the season at Wyoming and came from there to Pueblo. The DeWitt, Baker and Reformatory herds were making their initial bow to the public for this year. A large crowd of western breeders and stockmen were at the ringside to see the ribbons hung by H. J. Gramlich of Lincoln, Neb. The class for three bulls and the class for two bulls bred by exhibitor were creditably filled and made an impressive sight. In the aged bull class, Marcas Fairfax could not be denied his placing at the head over the Canary bull, Repeater 54th. The winner, while not so rangy, showed somewhat more depth of body and a wonderful finish. The placing on the tops of all the bull classes were close. The senior bull calves faced the judge in what was perhaps the most interesting class of the showing with first place going to Ken Caryl on Morton Fairfax, by LeRoy Fairfax. The winner carried out in his lines a little better and with his general get-up seemed to fill the eye of the judge to perfection. The second and third placings on two sons of Mischief Mixer, shown by Geo. W. Baker of Littleton, were very close, however, and any of the three would have looked well wearing the blue.

The female showing was in every respect in line with the quality of the bulls and brought out some of the best calves that have ever been shown in Colorado. In no class was there a walk-away for the ribbons. The get of sire class won by T. F. DeWitt of Denver on the get of Mischievous Jr., grand champion of the 1921 National Western Stock Show, was a real treat for the lovers of the white-face. In uniformity of conformation little was to be desired in any of the three groups shown, though the winners did seem to carry a slightly more uniform character about the head.

Exhibitors—Geo. W. Baker, Littleton, Colo.; T. F. DeWitt, Denver; J. D. Canary, Littleton, Colo.; Ken Caryl Ranch, Littleton, Colo.; State Reformatory, Buena Vista, Colo.; Wilbur E. Grant, Avondale, Colo.; L. C. Grant, Avondale, Colo.

Judge—H. J. Gramlich.

Three bulls owned by exhibitor—1, Ken Caryl Ranch; 2, Canary; 3 DeWitt.

Two bulls, owned and bred by exhibitor—1, Canary; 2, DeWitt; 3, Baker.

Aged bull—1, Ken Caryl on Marcus Fairfax; 2, Canary, on Repeater 54th; 3, State Reformatory, on Beau Blanchard 86th.

Two-year-old bull—1, Canary, on Repeater 55th; 2, DeWitt, on Punch; 3, Ken Caryl, on Caryl Domino.

Senior yearling bull—1, Baker, on Dale Mixer; 2, Canary, on Repeater 71st; 3, Ken Caryl on Mansell Boy 183d.

Junior yearling bull—1 and 2, DeWitt, on Col-

JOHN CAMPBELL,
Republican Candidate for Supreme Justice.

John Campbell, Republican candidate for Supreme Justice—four-year vacancy—for the state of Colorado, located in Colorado Springs in 1879. He has served in both Senate and House of Representatives; was elected District Judge of Fourth Judicial District in 1888, serving six years. He was elected in 1894 to the supreme court, serving until January, 1913. In June of this year he was appointed to fill the vacancy in the supreme court. His election will add to the efficiency of Colorado's highest court and will be a credit to the state. Political Advertisement.

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orado Fairfax 2nd and Prince Mixer; 3, Canary, on Repeater 74th.

Senior bull calf—1, Ken Caryl, on Morton Fairfax; 2 and 3, Baker, on Mischief Mixer 10th and Mischief Mixer 18th.

Junior bull calf—1, Baker, on Mischief Mixer 20th; 2, Ken Caryl, on Roger Fairfax; 3, Canary, on Repeater 77th.

Senior and grand champion bull—Ken Caryl, on Marcus Fairfax.

Junior champion bull—DeWitt, on Colorado Fairfax.

Aged cow—1, Ken Caryl, on France Lassie; 2, Canary, on Miss Repeater 36th; 3, Ken Caryl, on Queen's Mischief.

Two-year-old cow—1, Ken Caryl, on Crystal Mischief; 2, DeWitt, on Miss Robert M. 15th; 3, Ken Caryl, on Duchess Domino.

Senior yearling heifer—1 and 2, Ken Caryl, on Lady Domino 8th and Rebecca 2nd; 3, Canary, on Miss Repeater 74th.

Junior yearling heifer—1, Baker, on Sagetha Mischief; 2, DeWitt, on La Bella 3rd; 3, Canary, on Miss Repeater 76th.

Senior heifer calf—1, Canary, on Miss Repeater 87th; 2, Baker, on Donna Mischief; 3, Ken Caryl, on Duchess Carlos.

Senior and grand champion female—Ken Caryl on France Lassie.

Junior champion female—Ken Caryl, on Lady Domino 8th.

Aged herd—1, Ken Caryl; 2, Canary.

Yearling herd—1, DeWitt; 2, Canary; 3, Baker.

Calf herd—1, Baker; 2, Canary; 3, Ken Caryl.

Get of sire—1, DeWitt, on Mischievous Junior; 2, Canary, on Repeater 63rd; 3, Baker, on Mischief Mixer.

Small Showing of Shorthorns.

The showing of the red roans, and whites, was the lightest seen at Pueblo for several years, due in part to the fact that the Maxwell-Miller Co., the D. Warnock & Sons, had show herds on other circuits. The show strings from the Colorado Agricultural College, Fort Collins, Colo., The Pine Valley Dairy & Farms Co. of Colorado Springs, Colo., and William Duncan of Yoder, Colo., had things very much their own way in the various classes entered. Lord Douglas, one of the best sons of Model Type, headed the College herd and was awarded the senior and grand championship ribbons, while Royal Rose, showing with calf at side, won the championship honors in the female division. First and third in the senior heifer calf class of five animals went to Capt. Wm. Duncan of Yoder on Roan Lassie and Roan Lady D. Captain Duncan, who is over 82 years old, was the oldest exhibitor on the ground and showed his Shorthorns at the Topeka, Kan., fair forty-one years ago. He also won first on calf herd with his two heifers and the second prize senior bull calf.

The dual-purpose herd of the Pine Valley Dairy & Farms Co., of Colorado Springs showed without opposition in the Milking Shorthorn division and also annexed some of the money in the beef classes.

Exhibitors—Colorado Agricultural College, Ft. Collins, Colo.; William Duncan, Yoder, Colo.; Pine Valley Dairy & Farms Co., Colorado Springs, Colo.

Judge—H. J. Gramlich.

Three bulls, owned by exhibitor—1, Colorado Agricultural College; 2, Pine Valley Farms Co.

Two bulls, bred and owned by exhibitor—1 and 2, Colorado Agricultural College; 3, Pine Valley.

Aged bull—1 and 2; C. A. C.; 3, Pine Valley.

Junior yearling bull—1, Pine Valley.

Senior yearling bull—1, C. A. C.; 2, Wm. Duncan.

Junior bull calf—1, C. A. C.

Aged cow with calf at side—1, C. A. C., on Royal Rose.

Aged cow—1, C. A. C., on Lothian Countess; 2, Pine Valley on P. V. Miranda.

Two year-old heifers—1, C. A. C., on Royal Violet; 2, Pine Valley, on P. V. Beauty.

Senior yearling heifer—1, C. A. C., on Velvet Douglas; 2, Pine Valley on P. V. Helen.

Junior yearling heifer—1 and 2, C. A. C.; 3, Pine Valley on P. V. Hinette.

Senior heifer calf—1 and 3, Duncan on Roan Lassie and Roan Lady; 2, C. A. C. on King's Rose.

Senior and grand champion bull—C. A. C. on Lord Douglas.

Junior champion bull—Rose's Type.

Graded herd—1, C. A. C.; 2, Pine Valley.

Yearling herd—1, Pine Valley.

Calf herd—1, Duncan; 2, Pine Valley.

Get of sire—1 and 2, C. A. C., on Snow King and Lord Douglas.

Aberdeen Angus Cattle.

Two excellent herds of the blacks were shown by D. D. Barr & Son of Sanford, Colo., and R. R. Lucore & Sons of Arriba, Colo. The premium money was well divided between the two herds, with Lucore winning senior and grand champion on his two-year-old bull, Knollwood Embosser 2nd. The junior championship on bulls went to Barr's on their first prize senior calf, Erwin's Marshall. Lucore's two-year-old Knollwood Laura was made senior champion but gave way to junior yearling and junior champion to Prizenora 2nd, shown by Barr's for the grand champion. The Barr's took five blue ribbons and Lucore's string carried away seven.

Red Polled Cattle.

A herd of these sleek red cattle was shown by Paul Larsen & Son of Walbach, Neb., without opposition.

Fat Cattle.

The list of exhibitors of fat steers or spayed or free martin heifers and the awards follow:

Exhibitors—Geo. W. Baker, Littleton, Colo.; Colorado Agricultural College; T. F. DeWitt, Denver; Ken Caryl Ranch, Littleton, Colo.; L. C. Grant, Avondale, Colo.

Senior yearling—1, Baker (Hereford); 2, Baker (Hereford); 3, Colorado Agricultural College (Shorthorn).

Junior yearling—1, DeWitt (Hereford); 2, Ken Caryl Ranch (Hereford); 3, Grant (Holstein-Hereford cross).

Senior calf—1, Ken Caryl (Hereford); 2, Baker (Hereford); 3, Colorado Agricultural College (Shorthorn).

Junior Calf—1, Baker (Hereford); 2, DeWitt (Hereford); 3, Ken Caryl (Hereford).

Herd of three owned by exhibitor—1, Baker; 2, Ken Caryl; 3, Colorado Agricultural College.

Champion steer—Baker on Colorado Mixer, junior yearling Hereford.

Holstein-Friesian Cattle.

With seven exhibitors showing, the Holstein ring was a real dairy cattle show. The Arkansas Valley Model Dairy Farm of Holly was a contendor in nearly every class, but was not able to repeat its winnings of a year ago. The State Reformatory with a full herd, C. W. Henry of Greeley, Ben Simpson and Casper Hoffman, Colorado Agricultural College, and Fremont County Farm furnished plenty of competition. The Model Farm carried their cow, Pioneer Oakes Korndyke Mantell, through to the grand championship and their two-year-old bull Avoca Lodge King Johanna was senior champion, but Hoffman's white yearling, the junior champion, was made grand champion by Judge Standish, although the ringside opinion was divided as to the merits of the two bulls. One of the most typey cows in the showing was the two-year-old heifer, Miss Pietertje Johanna Mercedes 2nd, shown by Henry, and winning in her class. Henry won the junior championship on females on his calf Cragdale Valentine Ormsby Skylark.

Exhibitors—State Reformatory, Buena Vista, Colo.; Colorado Agricultural College, Ft. Collins; Ben F. Simpson, Denver; Caspar Hoffman, Denver; Arkansas Valley S. B. & I. L. Co., Holly, Colo.; C. W. Henry, Greeley, Colo.; Fremont County Farm, Canon City, Colo.

Judge—W. H. Standish, Lyons, Ohio.

Aged bull—Colorado Agricultural College on King Gerben Lincoln.

Bull, 3 years old—1, Colorado State Reformatory, on Pahgre Everett Ragula Count.

Two-year-old bull—1, Arkansas Valley S. B. & I. L. Co., on Avoca Lodge King Johanna (senior champion); 2, Simpson, on Rag Apple Peggy Paul (junior and grand champion).

Year-old bull—Hoffman, on King Creamelle Waldorf; 2, Simpson, on Windsor Johanna De Kol Prince; 3, Arkansas Valley Co. on Paramity Rag Apple De Kol.

Senior bull calf—1, Fremont Co. Farm, on Fremont Lunde Pride; 2, Simpson, on Sir May Day Ismay; 3, Colorado Agricultural College.

Aged cow—1 (senior and grand champion), Arkansas Valley Co. on Pioneer Oakes Korndyke Mantel; 2, C. A. C., on Barbara Duchess Clyde [illegible]; 3, Colorado Reformatory on Pahgre Elsa [illegible].

Three-year-old cow—1, Arkansas Valley Co., on Paramity Maplecrest Zandeveer; 2, C. A. C., on Creole Korndyke Mercedes; 3, Reformatory, on Pahgre Holly Segis Johanna.

Two-year-old heifer—1, Henry, on Miss Pietertje Johanna Mercedes; 2, Fremont Co. Farm, on Fremont Creamelle Pontiac; 3, Reformatory, on Pahgre Florence Bess Girl.

Senior yearling heifer—1, Arkansas Valley Co. on Paramity Ormsby Buffalo; 2, Reformatory, on Rose Segis Lyons Johanna; 3, Simpson, on Colatti Rag Apple Johanna.

Junior yearling heifer—1, Arkansas Valley Co., on Paramity Korndyke Ormsby; 2, C. A. C., on Cragdale Belle Skylark; 3, Reformatory, on Glen Carmen Segis.

Senior heifer calf—1 (junior champion), Henry, on Cragdale Valentine Skylark Ormsby; 2, Simpson, on Mary Paul Johanna; 3, Arkansas Valley Co. on Paramity Johanna King DeKol.

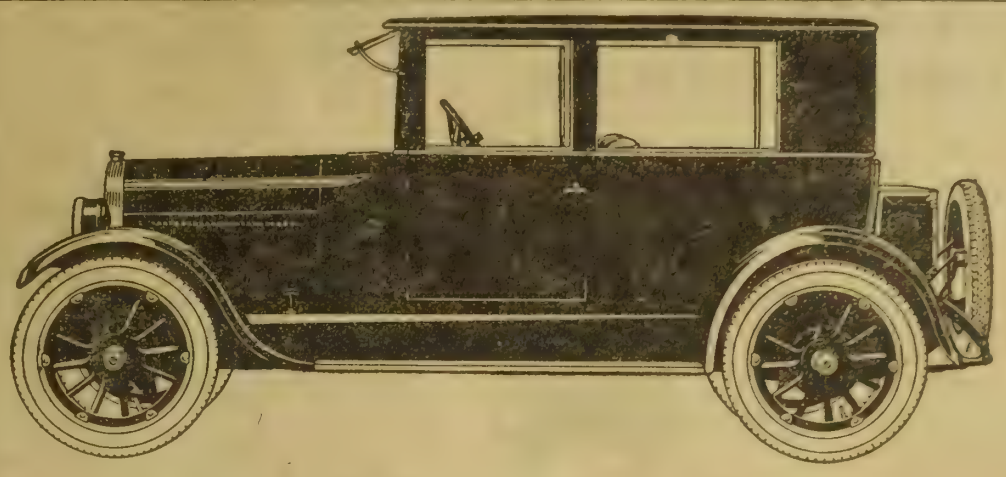
Graded herd—1, Arkansas Valley Co.; 2, C. A. C.; 3, Reformatory.

Yearling herd—1, Arkansas Valley Co.; 2, Simpson.

Calf herd—1, Simpson; 2, Arkansas Valley Co.; 3, Henry.

Get of sire—1, Arkansas Valley Co.; 2, Reformatory; 3, Henry.

(Turn to Page 18.)



$1445

5-PASSENGER COUPE
Trunk Extra

Have You Seen Oakland's 1923 Closed Cars?

The moment you see these beautiful New Oakland closed cars, you will want to own one or the other. Somehow you will feel, instantly and keenly, that the entire motor car market has no more satisfying cars to offer vou.

Both of the new 1923 bodies are built by Fisher. Their new and distinctive beauty; their graceful lines; the wealth of their interior appointments and refinements; their comfortable all-weather riding qualities and their complete mechanical dependability—all will impress you with the unusually high quality of these new models.

Mounted on the standard Oakland chassis, both of these new cars are powered with the six-cylinder, overhead-valve, Oakland-built engine—the only engine in the world with a performance guaranteed in writing for 15,000 miles.

Combining beauty with substantial and enduring mechanical construction, these closed cars possess that quiet, smooth and flexible performance so necessary to complete closed car satisfaction.

We ask only that you see these new models and compare them critically with any others built. After that, we feel certain you will share our sincere belief that they offer a greater measure of beauty and utility than you can possibly find elsewhere at prices so remarkably low.

OAKLAND MOTOR CAR COMPANY, PONTIAC, MICHIGAN
Division of General Motors Corporation

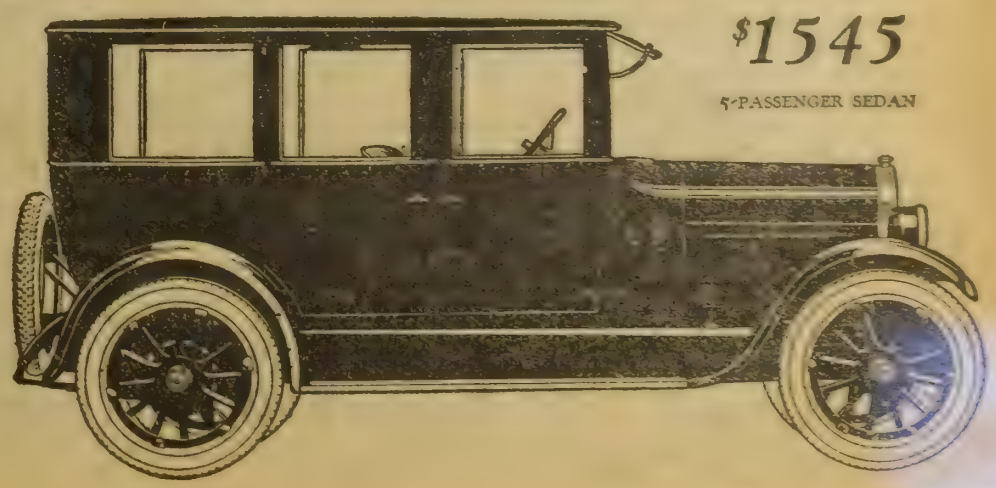
The New Oakland *Six*

Oakland's special written, 15,000 mile engine guarantee is conclusive proof of the in-built dependability of the new 1923 Oakland. It is possible to give this unusual guarantee only because of the high quality in every part of this car's sturdy construction.

The 1923 Series

Roadster, 2-Passenger,	*$ 975*
Touring, 5-Passenger -	*995*
Sport Car, 4-Passenger	*1165*
Coupe, 2-Passenger -	*1185*
Coupe, 5-Passenger, -	*1445*
Sedan, 5-Passenger -	*1545*

All prices f. o. b. at Factory



$1545

5-PASSENGER SEDAN

Every Housewife
Should Know These Facts About Baking Powder

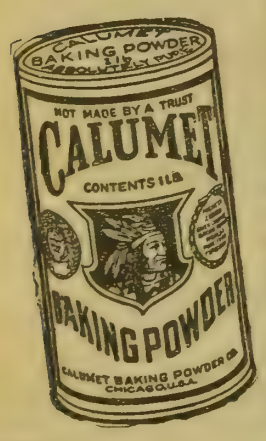
—that a big can at a low cost many times results in bakings that are unfit for food.

—that lack of proper leavening strength means failure and disappointment on bake-day.

—that one cent's worth of inferior Baking Powder many times ruins one dollar's worth of other ingredients.

—that millions depend on

CALUMET
The Economy BAKING POWDER



not because of quantity but on account of quality—not because of price but by reason of results.

That is why the sale of Calumet is 2½ times as much as that of any other baking powder.

Buy it—try it—never fail to use it.

A pound can of Calumet contains full 16 ounces. Some baking powders come in 12 ounce instead of 16 ounce cans. Be sure you get a pound when you want it.

BEST BY TEST

THE WORLD'S GREATEST BAKING POWDER

$7.50 After 30 Days Free Trial

The Belgian Melotte Separator—with the wonderful Self-Balancing Bowl. No other like it.

30 days' free trial—then, if satisfied, only $7.50 and a few easy payments—AND—the wonderful Belgian Melotte Separator is *YOURS.*

No Money Down!

Catalog tells all—*write.*

Caution! U. S. Bulletin 201 shows that vibration of the bowl causes *cream waste!* The Melotte bowl is *self-balancing.* Positively cannot get out of balance therefore cannot vibrate. Can't remix cream with milk. *The Melotte has won 284 Grand and International Prizes.*

Catalog FREE

Write for new Melotte catalog containing full description of this wonderful cream separator and the story of M. Jules Melotte, its inventor. Don't buy any separator until you have found out all you can about the Melotte and details of our 15-year guarantee which is infinitely stronger than any separator guarantee. Write TODAY.

Runs so easily, bowl spins 25 minutes after you stop cranking unless you apply brake. No other separator needs a brake. Bowl chamber is *porcelain lined.*

The Melotte Separator, H. B. Babson, U.S. Mgr.
Dept 3387 2843 W. 19th Street, Chicago, Ill.
2445 Prince St., Berkeley, Calif.

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Prints 4c to 6c.
MAIL IN YOUR FILM.
ONE DAY SERVICE
NO DELAY.
EASTMAN KODAKS, ALBUMS, FILM, ETC.
Send for Catalog and Price List.
Mile High Photo Co.
Established 1905.
321-23-25 17th St. Denver, Colo.

Ship Your CHURNING CREAM to Windsor Farm Dairy, Denver.

Aspirin

Say "Bayer" and Insist!

BAYER

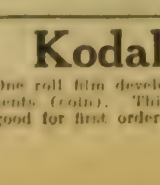
Genuine

Unless you see the name "Bayer" on package or on tablets you are not getting the genuine Bayer product prescribed by physicians over twenty-two years and proved safe by millions for

Colds	Headache
Toothache	Lumbago
Earache	Rheumatism
Neuralgia	Pain, Pain

Accept "Bayer Tablets of Aspirin" only. Each unbroken package contains proper directions. Handy boxes of twelve tablets cost few cents. Druggists also sell bottles of 24 and 100. Aspirin is the trade mark of Bayer Manufacture of Monoaceticacidester of Salycylicacid.

Wear Overland Aluminum Shoes



From Factory to Feet

Save Money and Prevent Sickness
Water-proof, rust-proof, rot-proof. No metal touches you. Keep feet in good condition. Money back if not satisfied. Free catalog for a postal.
OVERLAND SHOE CO.
Dept. 119. Racine, Wis.

Kodak Finishing

One roll film developed and 6 velvet prints for 15 cents (coin). This is a "get acquainted" offer, good for first order only. Kodak Kitchen, Yale, Ok.

The Rural Household

Questions about home problems promptly answered by letter and through the magazine. Letters from women containing helpful suggestions for improvement of rural life are always welcome. Address all communications to Mary G. Collopy, Editor Home Department, Western Farm Life, Denver, Colo.

Home.

By the fireside still the light is shining
The children's arms round the parents twining,
From love so sweet, O who would roam?
Be it ever so homely, home is home.
—D. M. Mulock.

Making a Jelly Scaffold.

Having just read your appeal for helpful suggestions, I will send my mite. It has proved a might of help to me and may to others.

It is a jelly scaffold. My 13-year-old son made mine. I could make one myself and so can many other housewives.

The bottom or platform is the stout end of a box. The upright pieces are lathe, also the cross piece at the top. The bottom is about 1 foot square and the top about 2 feet high, with a screw-eye, on which to hang the jelly bag.—Mrs. G. W. M., Delta county, Colo.

My Neighbor's Story.

Let me describe my couch to you. It is not arranged for company, but is waiting for the man off the binder or the tractor. It is covered with brown burlap and has two large pillows covered with linen crash. It has a good light upon it and beside it is a table with the morning mail in plain sight. Can you see the busy farmer who has been up since 4 o'clock enjoy that few minutes of relaxation after dinner?

Going A-Fairing.

The call of the fairs in the early fall, and especially of the State Fair, is as the call of the wild to some people, and the writer is no exception.

Fair-time is indeed her own special time, and this year as usual she blithely packed her bag and sallied forth to attend a cycle of county and community fairs ending up with the State fair at Pueblo. This proved a fitting climax to the month's exhibits, for here were gathered together not only many of the prize-winning exhibits of local fairs, but other displays of unusual excellence.

The theory that women visitors are supposed to spend their time almost entirely among the exhibits of the Women's Department did not hold good, for many displays in other departments attracted large numbers of the gentler sex. Some of the exhibits which were especially popular with the women were the apiary, better babies, school exhibit, dairy products, poultry, pet stock, boys' and girls' clubs, and the art department.

A considerable number of babies were entered in the better babies contest and submitted most graciously to the various processes of weighing and measuring.

The attractive brick building given over to poultry and pet stock was a riot of red and blue ribbons which, with the colors of the different breeds of poultry and the accompaniment of crowing, cackling, quacking, barking, whining, howling and meowing from all the company assembled therein made a most impressive exhibit. Among the dogs shown there were several stalls of friendly little Boston terriers, which attracted large crowds.

The art exhibit deserves especial mention, for in the little round building with the sign "Art" were a large number of unusually fine pieces of work exhibited by individuals and art schools, and the Fair-Lady regretted that time permitted her to make only three visits to this little building, for each time she found something else that seemed especially good. The number of photographs shown was very small, and this portion of the art department could well be enlarged.

Some way this lady when she goes a-fairing always brings up in the women's department, generally a most interesting place to spend several hours, and in the sections of pantry stores, clothing and needlework at the State fair there was shown this year a large amount of excellent work.

In the canned goods, the fruit, vegetables and meat were of a very fine grade, a little better perhaps than the jellies, jams and butters. Strange as it may seem, many of the best looking jellies do not quite qualify as to other tests, and we are all apt to get a little careless in the preparation of jams and conserves.

The baked goods exhibited showed that they came from skilfull hands and most of them tasted as good as they looked—so the judge said! And that must have been mighty good.

In the clothing and needlework sections there was a great deal of wonderful embroidery, crochet work and tatting, but not so much clothing of a practical sort. In the group of hand-made garments were a number of exquisite workmanship on material worthy of hand work. The material is sometimes not chosen carefully enough nor with the thought of the way it is to be used, and suitable material is necessary where fine stitches are to be made by hand.

The exhibit of baby things, dear to the heart of every woman, could have been enlarged to great advantage by an exhibit of an attractive, practical layette. Perhaps the Fair Board can be persuaded to offer a prize for such an exhibit another year.

It seems a pity to see in so many of the premium lists of the different fairs a class listed "Old Ladies' Work. Exhibitors must be 70 (or 60) years old or more." In these days there are few ladies who would wish to be classed as "old ladies," and even so most of them would wish to compete in the regular classes instead of being relegated to a group by themselves.

It was most interesting to the Fair-Lady to stroll about and listen to the comments on the articles which had been awarded premiums. "Now, I can't see why ever that table runner there got first. Just look at that plain edge, and that little bit of embroidery, and then look at that beautiful one next to it with the wide border of crochet and all those tassels. That never got a thing."

Well, the ways of judges are past finding out, thought the Fair-Lady, but after all, is the official judge the real judge? Are not the visitors the true judges and weighers of what they like and approve, and does it matter so much if an article fails to receive a premium if it suits the person who made it and all her friends and relations. The Fair-Lady quite approves of the frank discussions with the men folks who want to know just why the wife or daughter did not receive the blue ribbon on her entry.

One thing she has had borne in upon her in this tour of fairs, and that is the need for simplicity. Lets have good plain quality in our food and cut out and off, all the frills in the way of cake decorating and elaborate fillings and icings. In the clothing and needlework, lets get down to more practical things. Fancy work we must have, of course, but let it be of good design and exquisite workmanship and appropriate to the use for which it is intended!—Blanch E. Hyde.

Our Fashion Service.

All patterns 12 cents each. Address Western Farm Life, Pattern Department, 1518 Court Place, Denver, Colo.

Read This Before Ordering: Patterns ordered through this magazine are mailed promptly from the factory at Brooklyn, N. Y., and arrive in 10 to 12 days from time order reaches Western Farm Life. Be sure to specify size and number of patterns. Write your name and postoffice address plainly to avoid delay. These patterns are handled at cost, as a service to our women readers. The price of 12 cents includes postage.

4073-4113—A Very Attractive Model. Comprising a new "over the skirt" blouse and a very smart "panel" skirt. Printed voile and organdy are here combined. This style is good for serge with embroidered or braided bands, as well as for combinations of materials other than illustrated. The blouse is cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. The skirt in seven sizes: 25, 27, 29, 31, 33, 35 and 37 inches waist measure. To make this dress for a medium size, and as illustrated, requires 5½ yards of 32-inch figured material, and 3⅛ yards of plain material. The width of the skirt at the foot is about 2⅛ yards.

4103—A Seasonable Wrap for the Growing Girl.—Here is a smart cape that may be buttoned close to the neck, or, with collar rolled low, and fronts open, produce an equally attractive effect. Velours, tweed, crepe de chine, Canton crepe, or heather mixtures, all are good for this style. The pattern is cut in six sizes: 6, 8, 10, 12, 14 and 16 years. A 12-year size requires 4 yards of 44-inch material.

3960—A Comfortable Work Dress. It is the little touches in the finish of this garment that will please you—as well as knowing that it is easy to make and comfortable to wear. In seersucker or chambrey or a neat pattern of percale it is quite as nice as if made up in gabardine, dimity or dotted Swiss. It is cut in

seven sizes: 36, 38, 40, 42, 44, 46 and 48 inches bust measure. A 38-inch size requires six yards of 36-inch material.

4132—A Popular Suit Style for the Small Boy.—Galatea, linen, Indian head, and serge are desirable materials for this design. The blouse may be made with sleeves in wrist or elbow length. The pattern is cut in four sizes: 3, 4, 5 and 6 years. A 4-year size requires 1¾ yard of 27-inch material for the blouse and 1⅝ yard for the trousers. To make collar and cuffs of contrasting material will require ½ yard.

4107—A Popular Shirt Waist Style. Here is a very smart conservative model, suitable for wash fabrics, for silk, flannel and velveteen. The collar is convertible. The fulness of the fronts is gathered to yoke extensions of the back. This style will be pretty in the soft crepe weaves, or in butchers linen. Stitching, hemstitching or binding makes a suitable finish. The pattern is cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires three yards of 32-inch material.

4124—A Pretty Frock for Slender Figures. Youthful lines and becoming plait fullness are pleasing features of this style. It is nice for all crepe weaves as well as for voile, gingham and tub silk. Serge and kasha cloth also would be suitable. The pattern is cut in three sizes: 16, 18 and 20 years. An 18-year size requires 5¼ yards of 36-inch material. The width of the skirt at the foot is 2¼ yards.

4114—A Smart Frock for the Growing Girl. Serge with braid trimming would be good for this model. It is nice also for combinations of material. The collar, vest and skirt panel could be of plain goods, with the other portions of striped, plaid or figured material. The pattern is cut in three sizes: 12, 14 and 16 years. A 14-year size requires 4¾ yards of 36-inch material.

4127—A Jaunty Wrap. This is a splendid utility style, suitable for all cloakings. As portrayed, tweed was used, with trimming of braid. The collar is convertible. This pattern is cut in four sizes: Shall, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires 5½ yards of 44-inch material.

Not every boy may grow up to be president, but some boys now listening in on the wireless 'phone is destined to become secretary of the radio department when such a department of the government is created some years hence.

To Get Trip to Europe.

A free trip to Europe with all expenses paid is the prize for the four champion girls of the United States in 1922, which has been announced by the National Committee of Boys' and Girls' Club Work for girls' canning clubs.

Boys' and girls' club work is an important project in the program of the American Farm Bureau Federation and the contest is open to all girls who are members of the canning clubs.

This is the largest prize ever offered to the farm girls of America. Fifty-five thousand rural girls' clubs conducted by agricultural colleges, the United States Department of Agriculture co-operating, are competing in the contest.

The American committee for Devastated France is providing the prize trip for the four girl winners and for the three women leaders who will train the winning teams.

The unit will leave the United States about June 1, 1923, and will be gone abroad for three months, eight weeks of which will be spent in France in canning demonstration work in the devastated region in co-operation with the French Department of Agriculture, and in visiting many places of interest in our sister republic. The remaining month will be spent in visiting some of the other countries of Europe.

Keep Your Hens at Home.

Many people in small towns are bothered with their neighbor's chickens and many farmers are troubled with certain hens which insist on flying over the garden fence and feeding on the delicacies. This habit of flying can be easily cured by a simple operation on the wing. This single operation consists in cutting a ligament in the wing and does not cause the bird to carry a dropped or slipped wing.

First remove a few feathers around the second joint. Spread the wing out to its full width and you will see just beneath the skin on the outer edge of the second joint a small white ligament or cartilege. Insert a small knife blade under the ligament and cut it in two, pulling upward and outward on the knife. Then cut a piece from the end of the cartilege one-sixteenth of an inch long. This may be done with a pair of scissors or with a knife. The object in removing this section is so the cartilage will never grow together again.

Successful Venture in Co-Operative Livestock Marketing.

(Continued from Page 5).

each deal, but the general basis of bargaining as outlined in the foregoing is considered as fundamental by both parties to the transaction.

Producer and Consumer Co-Operate.

From the foregoing it is readily seen that the plan has been developed to meet the needs of the corn-belt feeders and has great possibilities for future service. It also meets a need of the producer for larger remuneration for the service he renders in growing the cattle and is in keeping with the recommendations of the Federal marketing service that more economic methods of marketing and distributing food products is a necessity for the maintenance of adequate basic production. The principles of the plan are fundamentally correct and economically sound, because the producer and finisher of beef cattle must have relief if adequate production of this product is to be maintained at the least possible cost that will insure reasonable profit.

Public demand and necessity should determine the service to be rendered and the pay for such service should be based on the amount furnished. When the public demand for livestock does not warrant the cost of production the grower or feeder must of necessity stand the loss and must reduce the cost of his product and cost of distribution and marketing or go out of business. He has no other recourse. The same principle should apply to all interests connected with the livestock industry. When the public demand does not warrant the efforts of those engaged in a certain line of production those efforts should not be imposed upon either the producer or the consumer of any basic necessity.

The Ohio buyers, Scott O'Day and A. S. Mole, are now purchasing two trainloads of cattle in Colorado to fill their early orders and expect to return about November 1 to fill a larger number of later orders. Inquiries are coming to the Colorado State Farm Bureau from other states relative to the purchase of feeders under this plan. More than thirty trainloads of cattle are now listed for sale with the state officers.

What Farm Boys Want in Food

There are several ways to keep boys satisfied to stay on the farm. One way is to give them flavory, energizing food.

The automobile, moving pictures, the telephone, and now the radio—all make farm life more enjoyable to the boy.

Add the foods he likes each day and you've made the attraction just about complete.

But that food must be more than merely tasty. It must be energizing, too. For those who work hard must have the sapped energy replaced.

Rare Food Value in This Pie

No other dessert equals a luscious raisin pie made with big, plump, tender Sun-Maid Seeded Raisins.

Raisins furnish 1560 calories of energizing nutriment per pound—more of this kind of nourishment than eggs, meat or fish.

Raisin Pie

Two cups Sun-Maid Seeded Raisins, 1½ cup boiling water, ½ cup sugar, 2 tablespoonfuls corn starch, 2 tablespoonfuls lemon juice, 1 tablespoonful grated lemon rind, juice of 1 orange, 1 tablespoonful grated orange rind, 1 cup chopped walnuts.

Cook raisins in boiling water for 5 minutes, pour into it sugar and corn starch which have been mixed. Cook until thick, remove from fire and add other ingredients. Bake between two crusts. Walnuts may be omitted if desired.

All measurements for this recipe are level.

That's due to fruit sugar in the raisin. This sugar is practically predigested by the sun, so it revives a tired man almost immediately after eating.

Raisins furnish food-iron also—fine food for the blood. So these delicious Seeded raisins are both good and good for you.

Try the recipe for raisin pie printed on this page. Make it with your own delicious pie crust. The juice of the raisins forms a luscious sauce. You've never tasted better pie, nor has that boy of yours.

He wants delicious food like this that energizes.

Let him try it. See what he has to say. Add this touch to the other home attractions.

Blue Package (seeded) best for pie and bread.

Sun-Maid *Seeded* Raisins

Get delicious Sun-Maid Seeded Raisins. Big, plump, tender, juicy raisins. Made from finest California table grapes. Full of flavor, energy and iron.

Mail coupon for valuable free book of recipes.

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CUT THIS OUT AND SEND IT

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Dept. B-3910, Fresno, Calif.
Please send me copy of your free book, "Recipes with Raisins."

Name .....

Street .....

City ..... State.....

A Partner for the Boys, the Women, and for the Man Who Calls Himself Head of the House

INTERNATIONAL—the popular kerosene engine, is as faithful and willing a helper as you can find in a life-time of searching. One that neither grumbles nor shirks but just chugs away all day and night, if need be, and doesn't ask for over-time pay.

An engine that pleases the boy and the hired man because it does the pumping and keeps the tank filled with clean, fresh water when the weather is hottest and the stock most in need of water.

An engine that pleases the women folks—by taking the hard work out of wash day and by running the churn, cream separator, etc.

An engine that the family likes because it saws wood, grinds feed, shells corn, runs the fanning mill, and handles a dozen other jobs. It does these easier, faster, and better than you can do them by hand.

The smaller sizes, the powerful 1½ and 3-horse power engines, are the most popular for many of these jobs. If you need more power, the International 6 or 10 horse power sizes will supply plenty of it.

INTERNATIONAL HARVESTER COMPANY OF AMERICA
CHICAGO U S A

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We want a Local Representative in every locality to take subscriptions for Western Farm Life. Profitable work for a little of your time. For sample copies and full particulars write WESTERN FARM LIFE, Denver, Colorado.

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12 MONTHS

Western Farm Life
18 MONTHS

Both for Only
$1.00

Through a special arrangement we are able to offer The Breeders Gazette with Western Farm Life at greatly reduced rate. Order this club now.

This offer good for new or renewal subscriptions, and renewals will be extended from present date of expiration.

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Western Farm Life, Denver, Colo.:

Gentlemen—Enclosed herewith please find $1.00, for which send me Breeders Gazette for 12 months and Western Farm Life for 18 months.

Name .....

P. O. .....

R. F. D..... Box..... STATE .....

The Knot that Never Slips

THAT Square Deal KNOT is the secret of why Square Deal Fence *lasts longer* and looks better than most other fence.

It double grips the one piece stay wires and the wavy strand wires without cutting, breaking or slipping. It holds the joints rigidly in place—yet it is as flexible as a ball and socket joint allowing the wires complete freedom of motion. But *it never slips.* Our catalog tells why

SQUARE DEAL FENCE

fits the hills and hollows as well as level land. Tells why it stands tight and trim the years around without sagging, bagging or buckling. Tells why it is easier to handle, easier to erect and requires fewer posts. Tells how it is made and fully describes this unique knot. This catalog and copy of Ropp's Calculator sent FREE and postpaid to farm owners.

KEYSTONE STEEL & WIRE CO.
4009 Industrial St. Peoria, Ill.

FREE

Ropp's New Calculator 160 pages—which the Gives instant answer to any farm problem. Saves figuring—prevents mistakes. A post card brings it FREE and postpaid along with our new Square Deal Fence Catalog. Send for both today. (9)

Farmers' Service Bureau

Readers are invited to make generous use of this department. Questions regarding any branch of farming, livestock production, animal diseases, legal matters pertaining to the farm, homestead inquiries and the like cheerfully and promptly answered by letter and through the magazine. Address all communications to SERVICE BUREAU, WESTERN FARM LIFE, Denver, Colorado.

Use of Lime on Soil.

Is lime used as a fertilizer, and if so, in what manner is it applied? Where could I get a bulletin that would explain the use of lime?—W. C. M., Utah.

Lime is not generally classed as a fertilizer, but in some soils lime is deficient and it becomes sour or acid, a condition which is not suitable for the growing of many crops. On such soils the use of lime is of considerable benefit. For detailed information on the use of lime, write to the Western Lime Co., 305 Sugar Building, Denver, Colo., for their booklet on this subject, which will explain what soils need lime and gives other valuable information about its use. The National Lime Association, Washington, D. C., also publishes a number of bulletins on the use of lime which will be mailed on request.—G. C. W.

Homesteading Under Grazing Act.

Eight years ago I filed on a homestead and proved up five years later with forty-five acres under cultivation. Last year I filed on an enlarged homestead. Is it necessary to cultivate land on the enlarged homestead in order to make final proof?—H. A. A., Park county, Colo.

It is not clear whether the original entry was 160 or 320 acres. If it was 160 acres then the additional entry must be cultivated three years from date allowed. If it is grazing land a reduction in area must be obtained and the land used for grazing purposes for that period.

If the original entry was 320 acres then the additional is under the grazing act and no cultivation is necessary, improvements to the value of $1.25 an acre being all that is required. The government land office in Denver can supply circulars covering these points in detail.—Mary Wolfe Dargin.

Lease Terminates by Terms.

Last November I leased my farm to a man for one year with the understanding that he was to put in fall wheat if he remained. He decided to leave Colorado and did not put in the wheat and will not let us put it in unless we pay him $150. He claims that a lease is good until March 1. The lease was written and was for one year, dated November 12. Can we obtain possession of this land in November, as we wish to put out wheat?—G. H. M., Arapahoe county, Colo.

If the lease terminates by its terms the tenant can be made to quit at the end of it. The land owner should give him a notice to quit and if he does not then bring a suit in forcible entry and detainer and get him out.—Hamlet J. Barry, Equitable Bldg., Denver, Colo.

Determining Ditch Rights.

Last fall I purchased a piece of land upon which there is a surveyed ditch and an accommodation ditch about 100 feet apart belonging to another party who owns land on both sides of my place. He has not used the surveyed ditch since I have been on the place. It would carry water from a reservoir if used. The accommodation ditch carries flood water after every heavy rain. The agreement between the owner of these ditches and the man from whom I purchased the land was that he would allow the ditches to go through if he could use the water from the accommodation ditch first. The owner of this ditch now refuses to allow me any water. What are my rights? Could I survey through the accommodation ditch and take the water or do I have to allow him both ditches when one only catches flood water and has no natural source? He is trying to abandon the surveyed ditch and make his right good on the accommodation ditch which runs through my garden and within ten feet of the house. He has ordered me to move fruit trees so he will have room to work the ditch. He has surveyed this accommodation ditch, but it has not been patented.—L. A. N., Huerfano county, Colo.

In my opinion you should bring suit to compel the ditch claimant to elect on one or the other of the ditches, as your land ought not to be burdened with two of them. Of course, I am not aware of all the conditions involved, but if you have a right to get him off at all that is the way to find it out.—Hamlet J. Barry, Equitable Bldg., Denver, Colo.

Bindweed Again.

I have been troubled for three or four years with a weed which, according to your recent article in Western Farm Life, must be bindweed. Sometimes the roots run two or three feet from the plant and deep in the ground. I have two patches of it, one which started last year. As soon as I noticed it I dug it up and poured lye water in the holes, but this did not kill it. This year I tried to smother it with straw, which only made it spread worse. I used to rake it up on the first patch and tried to keep it dug out. This year I tried to get bluegrass started, but failed. It has spread to about four times its size at the start in three years. I have been told that it was a wild morning glory, but whatever it is, I certainly would like to get rid of it.—F. A. H., Weld county, Colo.

This is undoubtedly the field bindweed referred to in the article in Western Farm Life. It belongs to the morning glory family and is quite commonly spoken of as the wild morning glory. It is a most serious weed pest. If you have only a small patch of it it might pay to kill it by application of salt. The salt would have to be applied, however, at the rate of ten or fifteen tons to the acre. This makes it rather expensive except for a small patch. The land would not be of much value for other purposes for several years, but this weed will make it very difficult to grow good crops on land where it becomes well established.—G. C. W.

Sue Cattle Company for Damages.

Last summer a big cattle company taking their cattle past my homestead camped one and one-half miles away. The night man took the wires loose from my fence and tied them down and drove a large bunch of horses into my wheat field which was just starting to head. Two of my neighbors inspected it and estimated the damage to be at least $100. The company claimed this was done without their knowledge and "fired" the man who did it. I have been unable to get any settlement. Should I bring suit before the justice of the peace or take it to the county attorney?—W. M. E., Moffat county, Colo.

You should bring suit in a justice of the peace court against the company.—Hamlet J. Barry, Equitable Bldg., Denver, Colo.

Administering Will in Colorado.

I have been appointed as a trustee in a will covering farm lands and other property in Colorado. Will the laws of Colorado allow me to qualify as a trustee of my sister's portion of this estate while a resident of New Mexico?—R. C., New Mexico.

You should qualify first in New Mexico and then as ancillary executor in the county in Colorado where the property is located. You would have to come to that county to take the oath, but would not be disqualified by your nonresidence.—Hamlet J. Barry, Equitable Bldg., Denver, Colo.

Farm Hand Sues for Wages.

A man who worked through haying and who later spent most of the winter with me is threatening to sue for winter's wages. He was paid all that was coming to him when the haying was done. Before leaving for Denver he filed on a piece of land. I advised him to get work for the winter, but he soon came back broke. Although I told him I had no use for a hired man through the winter he remained with us until February, when he obtained work for two months, but came back again in April. He helped build some fence in return for which I helped him build his cabin. He has now employed an attorney and threatens to sue for wages during the winter and spring. He helped with chores and had his board, washing and mending done and the keep of a saddle horse. Can he force me to pay him wages? I have witnesses who heard my statements that I could not hire a man for the winter and pay him wages.—C. F. S., Jackson county, Colo.

If this man sues, simply defend yourself and produce your witnesses. From the facts given he will have a hard time to prove that you owe him anything.—Hamlet J. Barry, Equitable Bldg., Denver, Colo.

Redeeming Mortgaged Real Estate.

The mortgage on our farm was foreclosed and it was sold by the sheriff April 24. How long can we hold possession of it and how much time do we have in which to redeem it?—L. C., Arapahoe county, Colo.

The owner has six months within which to redeem and a creditor has three months longer, or nine months.—Hamlet J. Barry, Equitable Bldg., Denver, Colo.

Find Just What You Want.

Whenever you are in need of anything for your farm, ranch or household, and do not know where to buy it, look over the Farmers' and Stockmens' Ready Reference Directory in this issue. There you will find almost everything under the sun offered for sale by reliable firms that will treat you right in both price and service.

Alfalfa Varies in Feeding Value.

Is there something in the manner in which alfalfa is grown where irrigation methods are practiced in the western and mountain states that makes the crop superior to the alfalfa grown in the middle western states? Some eminent authorities believe there is. One of these authorities, Prof. Geo. I. Christie of Purdue University, Indiana, has been investigating very carefully the alfalfa fields in some of the states in the Southwest, and after a close study of alfalfa growing in the Salt River valley, Arizona, has this to say of this very important crop: "So far as I know you have the world beat on alfalfa, and it is not in its outward or apparent aspect, either. Your alfalfa has something that our alfalfa back in Indiana and other near-by states lacks. Because of your hot sun and irrigation a mineral quality is pulled from the soil in a way that has a markedly beneficial effect when cattle feed upon it."

Alfalfa is one of the stand-by crops on the Salt River project which was the first reclamation project to be constructed by the United States government. It covers 202,430 acres and the average farm unit is forty-five acres.

How much land is necessary for success under irrigation is not easy to answer. The smallest average farm unit under any government reclamation project is on the Okanogan project in Oregon, where twelve acres is the average. This Oregon district is largely devoted to fruit growing, which requires less acreage for a profitable and successful farm.

Of the land under irrigation in the Salt River project 65,000 acres are in alfalfa. This crop is cut four to eight times a year. The government estimate of yields per acre gives six to twelve tons as the average.

Twenty acres properly farmed under intensive cultivation methods should prove sufficiently large for one individual to care for and be successful. By using rotation methods a farmer will conserve his soil. The land should not be planted to one crop so that there will be more than one chance for success and profit. Some livestock should be on each farm. In this way twenty acres will make a man a sufficient income to live on, in ordinary comfort. A goodly portion of the living, eggs, milk, fruits and vegetables, will be made first hand from the place.

It will be an ideal condition when agriculture is practiced by each farmer owning his own place and doing a fair share of the work himself. Investigations made in Arizona have shown that the men on twenty-acre farm units have without exception been successful and prosperous even during the hard times of the past few years.

Referring again to the observations made by Prof. Christie on alfalfa, he said:

"In cattle feeding experiments in Indiana it was found that the cattle which were bred up as great producers soon began to show defects. They lacked bone strength and their progeny was weak. Investigation disclosed that it was not a lack of food, in the ordinary sense, but a lack of mineral substance. We devised a chemically prepared ration that is now offsetting that pernicious effect, but my point is that western alfalfa has just that mineral quality which eastern feed lacks."

Market Outlook for Farm and Ranch Products.

(Continued from Page 5.)

months of the crop year, estimating September clearances at 28,000,000 bushels, have been approximately 85,600,000 bushels. The record movement in that period occurred last year, when the total for the three months reached 135,327,000 bushels. In 1920, and 1914 also, this year's movement was exceeded, but the ten-year average was only 55,199,000 bushels.

Domestic consumption according to these figures, would be larger than last year, but flour production from July 1 to September 16 are estimated by Russell was about 9 per cent less than in the same period of 1921. The discrepancy may be due to larger stocks in the hands of mills or to the fact that more wheat is in transit between terminals due to the freight congestion, so that it is not counted in the visible supply. Even with this qualification, the rate of disappearance is satisfactory.

A summary of the situation for the first three months of the current wheat year and comparative figures for the corresponding period in 1921 and the ten years 1911 to 1920, appears in the table on this page showing wheat movements:

	Bushels	
	1922.	1921.
Primary receipts	157,201,000	193,687,000
Total disappearance	142,020,000	148,953,000
Exports, Sept. 1922, estimated	85,000,000	135,327,000
Flour production, July 1 to Sept. 16	28,978,000	31,800,000
		Aver. Bu. 1911-1920
Primary receipts		128,363,000
Total disappearance		100,053,000
Exports, September 1922, estimated		55,199,000
*Flour production, July 1 to September 16 (barrels)		24,604,000

*Average, 1918-1920.

Movements of Wheat.

The Canadian situation also has some surprises. Although farmers in the three northwestern provinces sold approximately 80,000,000 bushels in September, of which around 50,000,000 bushels reached Winnipeg, the increase in the Canadian visible has been negligible. Here again it seems to be a case of a lot of wheat in transit between primary markets and the seaboard, but it also appears that Canada has sold much more wheat for export than has been reported to the trade.

The relation between the probable exportable surpluses and needs of importing countries does not show statistical strength. The Department of Commerce estimates the crops of importing nations at 160,000,000 bushels less than last year, but this is partly offset by an increase in the rye and potato crops and the poverty of European countries may limit their purchases. Both France and Germany are putting food regulations into effect.

On the other hand, the North American crop is 112,000,000 bushels more than last year, the Argentine crop is estimated unofficially at 30 per cent more than last year, and India is reported to have removed the ban on exports. Australia reports some damage from dry weather, but the condition is not yet serious.

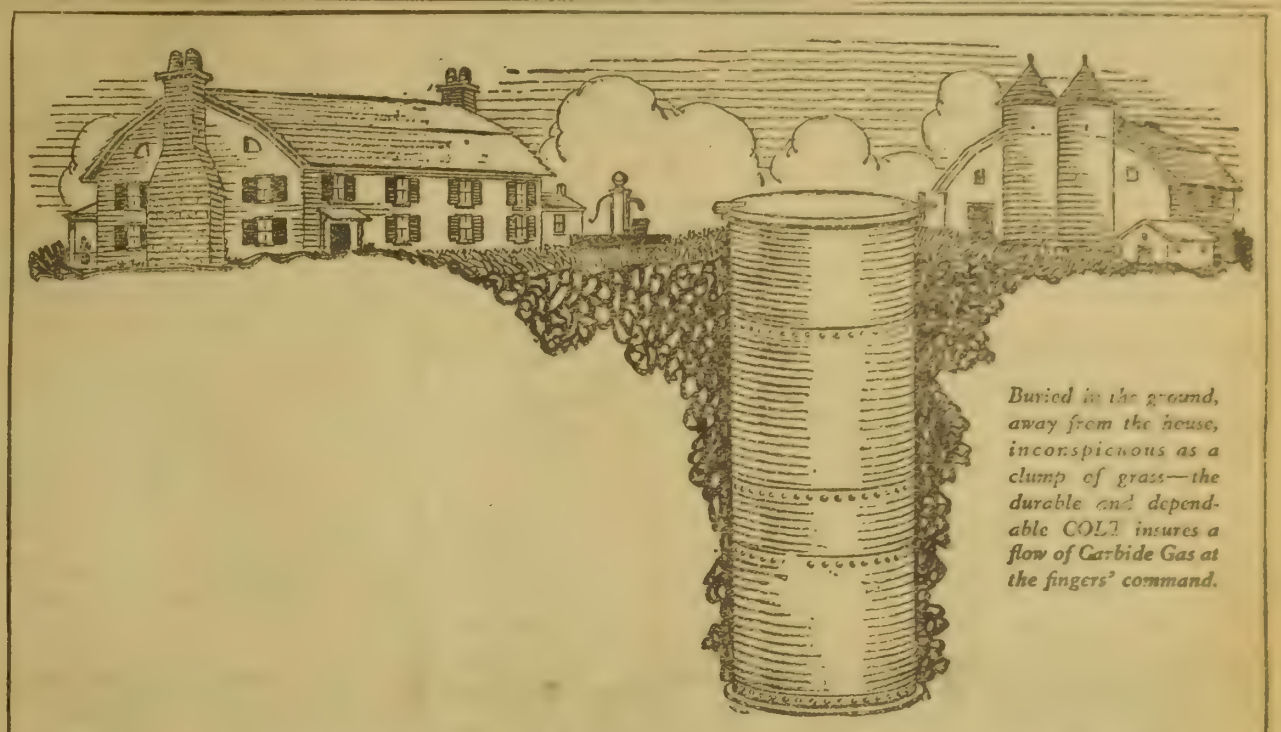
Congestion of shipping facilities both in the United States and Canada may yet [illegible] the statistical situation in determining the price trend, especially since importers have delayed their purchases and must have large amounts [illegible] North America in the next four or five months. After the close of navigation around December 10 this demand will center in the United States. At present it is partial to Canadian grain.

Coarse Grains on Firm Foundation.

Corn and oats prices have advanced about 10 cents a bushel in the last month. Domestic demand for corn, especially from the Southwest, has been exceptionally brisk, and industries have increased their purchases. There is some export buying, although clearances are running the smallest since November last year.

From November 1, 1921, to September 30, 1922, primary markets received 354,759,000 bushels, compared with 278,017,000 bushels last year, and a ten-year average of 230,329,000 bushels.

(Turn to Page 20).



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State Fair Awards.

(Continued from Page 13.)

Produce of dam—1, Simpson; 2, C. A. C.; 3, Henry.

Milking Shorthorns.

With the exception of one class, Pine Valley Dairy and Farms Co. of Colorado Springs, Colo., showed without opposition and carried away all prizes and championships in the Milking Shorthorn classification.

Jersey Cattle.

Three exhibitors, the Colorado Agricultural College, B. G. D. Bishop of Virginia Dale, Colo., and A. M. McClanahan of Greeley made the Jersey show. The College took both male and female grand championships. First prizes were taken by Bishop on three-year-old bulls, two-year-old bulls, junior yearling heifer, yearling herd, calf herd, and produce of cow. First prize was taken by McClanahan in the two-year-old bull class.

Guernsey Cattle.

The Agricultural College and W. L. Stone & Son of Pueblo were the only exhibitors of the Guernseys, the Stones having a full herd. The grand championship on bulls was won by Stone & Son, who also took first prizes on aged bull, yearling bull, aged cow, three-year-old cows, junior yearling heifer, senior heifer calf, graded herd, yearling herd, get of sire and produce of cow. The college won senior and grand championship on females, junior champion female, and first prizes on two-year-old and senior yearling heifers.

Strong Showing of Hogs.

In no other division of the fair has so

(Turn to Page 22.)

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Keep records of eggs laid and feed used. Record charts may be secured from the Extension Service, Colorado Agricultural College, Fort Collins.

Cull out all weak, runty, slow maturing pullets. They will not pay for their feed. Their eggs will be few and far between and they will be the early molters next summer. Utilize the space and feed that they would need for profitable pullets.

Whether pullets appear to be lousy or not, they should be powdered with sodium floride. Simply put from six to ten small pinches of the powder in the feathers next to the skin, being careful to reach the tail feathers and fluff below the vent and each wing.

Supply the pullets plenty of mash in hoppers and give liberal feeds of scratch grain in the evening. Variety is important. Green feed should be supplied in abundance. Oyster shell and charcoal are necessary. An occasional moist mash is a factor in good management.

Pullets should be housed in their winter quarters at once. It is much better to house them before they begin laying heavily. Be sure there is plenty of ventilation, but no direct draughts, and do not crowd the pullets. Your poultry house will accommodate profitably only a given number. A crowded house will cause endless trouble. A building 16x20 feet will house from 90 to 100 pullets comfortably, allowing 3 to 3½ square feet of floor space to the pullet.

New Poultry Editor.

A new editor is on the job in our poultry department. Mr. W. E. Vaplon, who for the past five years has served so efficiently as poultry editor has been compelled to drop this work through press of other business. During this period he gained the confidence of our many poultry producers and created a most useful department. Our new poultry editor is Paul C. Jamieson, poultry specialist in the Extension Service of the Colorado Agricultural College. Mr. Jamieson is well called a poultry specialist and we are fortunate in being able to add him to our staff to succeed Mr. Vaplon. He is thoroughly in touch with conditions all over the state and will be able to render most excellent service in keeping up the high standard of our poultry department.—G. C. W.

Record Storage of Eggs.

Eggs stored in five large market centers this year exceed the number in storage last year more than a million cases. United States crop reports show total holdings in New York, Chicago, Philadelphia, Boston and San Francisco amounting to 4,689,025 cases now, as compared with 3,519,522 cases on September 2, 1921.

The reports show also that the receipts of fresh eggs are low now and that large quantities are being used from the cold storage plants. This would indicate that the price of fresh eggs might be expected to advance in the near future, but that the price will probably not reach the high point of last winter. Prices will, however, depend a great deal upon the severity of the winter. Housing conditions on many farms are not such that hens will lay in the winter except when the weather is quite mild.—P. C. J.

Better Poultry at Fairs.

Only four Rhode Island Red birds were disqualified at the Arkansas Valley Fair in Rocky Ford this year, while fully 25 per cent of all entries in the Rhode Island Red classes were disqualified last year. These facts were given by J. Clevenger, manager of the Great Westrn Poultry Farm at Rocky Ford, who was superintendent of the poultry division. Similar conditions have been noted at the fairs in Larimer, Washington, Weld and Boulder counties.

Water Worth Sixty Cents a Quart.

Eggs are 48 per cent water. The amount of water which we can use to secure returns at the rate of 60 cents a quart depends upon the size of our flocks of laying hens.

A dozen eggs, minus the shells, weighing 24 ounces, contain 11.57 ounces of water, 2.32 ounces of protein, 2.26 ounces of fat and 0.22 ounces of ash. A pound of eggs is worth from 12 to 40 cents, depending upon the season and demand. A pound of wheat is worth from 2 to 4 cents. For every pound of grain a hen transforms into an egg, she puts in a pound of water, and in this way a pound of water is worth 30 cents when eggs are selling at 50 cents a dozen. A quart of water weighs two pounds and is worth 60 cents.—P. C. J.

Cockerel Has Paralysis.

One of our young cockerels has lost the use of his legs. His flesh is purple in color and he seems to be sore and stiff. Another one is lame in one leg. What is this trouble and is it contagious?—C. F. H., Morgan county, Colo.

From the symptoms it is evident the cockerel has paralysis. Very little can be done in the way of treatment. Try placing the cockerel in a warm, dry coop away from the rest of the flock. Give him a teaspoon of Epsom salts in a little bran mash. Feed plenty of grain with grit and charcoal and also give him sour milk. If the cockerel does not show improvement in a few days it will probably not pay to continue the treatment any longer.

Paralysis of fowls is not contagious, but a number of birds in a flock are often affected at the same time. It is usually caused by damp or drafty roosting places. Sometimes lack of meat, bone meal or green feed will cause birds to be similarly affected. The bird simply showing lameness probably has been injured in one leg. He will undoubtedly improve more rapidly if placed by himself in a small coop.—P. C. J.

Trap Nest for Poultry.

We have culled our flock of Barred Rock hens every other way except trapnesting, and would like to trap-nest them this fall and winter in order to keep only the very best layers. We would like descriptions and plans of successful trap nests.—Mrs. E. E. A., Jefferson county, Colo.

A government circular giving full plans and specifications for trap nests, entitled "Farmers' Bulletin 862, A Simple Trap Nest for Poultry," can be obtained by addressing Extension Service, Colorado Agricultural College, Ft. Collins, Colo. There is a big demand for hatching eggs and chicks from good trap-nested stock, and this demand is likely to increase as producers of poultry learn to appreciate the value of high producing stock.—P. C. J.

Culling Campaign Highly Successful.

More than 91,000 hens have been culled from the flocks of Colorado as a result of the poultry culling campaign conducted by the Extension Service of the Colorado Agricultural College. The saving in feed will amount to hundreds of tons. Reports indicate that many of the culls are being replaced by better young stock. One hundred and five culling demonstrations were held in sixteen counties, attended by 3,045 persons. Of those in attendance, 1,218 agreed to cull their home flocks following the instructions given. Most of them will probably cull every year in the future.

Use for Egg Shells.

Egg shells should not be thrown away but should be crushed and used for cleaning badly stained glass bottles, also for scouring the more delicate casseroles and enamel pans! the gardener can use them, when finely crushed, as a dressing, placing them a little below the surface soil, to benefit plants. Egg shells are composed chiefly of lime, and roses like nothing better. Choice seeds may also be planted in egg-shells, picking a fair sized hole in the bottom of the shell for drainage.

Seed germinated in this way can be transplanted in the shell without fear of root disturbance; the shell will rot and nourish the plant.

The heavy-laying hen possesses a long deep body and has a slab-sided appearance, indicative of great capacity.

Chicks do not enjoy standing in the hot sun to drink warm water. Keep the mash hoppers and drinking vessels in the shade.

El Paso County Boys Best Judges.

Of the fifteen stock judging teams competing in the State Fair contest the three boys from El Paso county stood first, being eight points ahead of the Larimer county team. This contest is one of the most exciting events of the club program at the fair. For months these young stock judges have been in training and by a series of preliminary contests have selected the very best judges to represent the respective counties. Each contestant is required to be a club member in good standing with all his club work for the year past up to date.

At the appointed time the competing teams reported to Professor B. W. Fairbanks of Colorado Agricultural College, who was the official judge for the event. Classes of beef cows, dairy cows, Poland China boars and Duroc Jersey sows were passed on in turn, fifteen minutes being allowed for the placing of each class and fifteen minutes for writing the reasons. Experienced stockmen who stood by and watched the boys go about their work were impressed with the systematic manner in which they covered the various points in making the necessary comparisons. No one who watches a bunch of these club boys in such a contest can doubt the value of club work in establishing correct ideals in livestock form and developing skill in judging the relative merits of different animals.

Mesa county won third place in the contest, Montrose fourth, and Delta county fifth. It is rather significant that of the fifteen teams, three of the five given places, were teams from the Western Slope. It is evidence that these newer counties are up and coming in the matter of livestock improvement.

The individual standing highest and winner of the $5 cash prize as an average of all classes judged, was Theo. Patterson of El Paso county, a member of the Myron Stratton Home club. Albert Haskett of Mesa county was second, Claude Reiser of Larimer county third, Julius Forsburg of Larimer county fourth, and Richard Galley, selected from the Highway Junction club of El Paso county, fifth.

In judging beef and dairy cattle the Larimer county team stood first; in Duroc Jersey hogs, El Paso county, and in Poland China hogs, Delta county. Theo. Patterson was high man in beef cattle and Poland China hogs; Orville Dunlap of Montrose county in dairy cattle, and Dean Besse, El Paso county, in Duroc Jersey hogs.

The first four prizes for the teams placed were $15, $12, $9 and $6. A cash prize of $2 went to the individual ranking highest in each class.

All club members showing pigs at the fair were eligible to compete in a showing contest in which each endeavored to show his or her pig to the best possible advantage before the judge. In this contest Frances Ratcliffe, of Range View Stock Farm, Henderson, Colo., won first and the sterling silver medal offered by the Swine World; Ellis Johnson of Fort Morgan, second and a bronze medal; Hollis Woodward, third and a bronze medal, and Junius Forsburg, fourth.

Select Seed Corn in Field.

No time spent in farm work will pay better returns than that devoted to careful selection of seed corn for next year's crop. The best possible way to select seed is in the field. It should be gathered after the corn is fully matured but not entirely dry. Alvin Kezer, agronomist at Colorado Agricultural College, points out that the seed ears should be selected first for the yield. Second, they should be taken from stalks which are fully matured. This is necessary in order to be sure to gather seed which will ripen under local prevailing conditions. Seed gathered in this manner is usually snapped or slip husked in the field and completely husked after it is brought in. The husks may be completely broken off and the corn laid on shelves to dry, or it may be suspended by string or wire on racks.

Seed corn should always be thoroughly dried. From seed properly dried perfect germination can be expected in most instances. Many experiments have shown that corn thoroughly dried will stand any amount of cold weather. The small amount of work which is necessary to get absolutely good seed is not expensive when considered in the light of a perfect stand and the yield to be obtained the following year.

Community service is the rent a person pays for the space he occupies on this earth.—Walter Burr in "The Community Program."

Mineralized Water Routs Chicken Lice

Tablets Dropped Into Drinking Founts Banish Vermin, Make Fowls Grow Faster and Increase Egg Yield.

Any poultry raiser can easily rid his flock of lice and mites, make chickens grow faster and increase their egg yield by simply adding minerals to the fowls' drinking water. This does away with all bother, such as dusting, greasing, dipping and spraying. The necessary minerals

can now be obtained in convenient tablets, known as Paratabs. Soon after the fowls drink the mineralized water, all lice and mites leave them. The tablets also act as a tonic conditioner. The health of the fowls quickly improves, they grow faster and the egg yield frequently is doubled. Little chicks that drink freely of the water never will be bothered by mites or lice.

The method is especially recommended for raisers of purebred stock, as there is no risk of soiling the plumage. The tablets are warranted to impart no flavor or odor to the eggs and meat. This remarkable conditioner, egg tonic and lice remedy costs only a trifle and is sold under an absolute guarantee. The tablets are scientifically prepared, perfectly safe, and dissolve readily in water.

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Market Outlook for Farm and Ranch Products.

(Continued from Page 17.)

In the same period the approximate disappearance from commercial channels has been 345,589,000 bushels this year, compared with 276,337,000 bushels a year ago and an average of 244,830,000 bushels in the ten preceding years.

Receipts of oats from August 1, the beginning of the oats year, to September 30, total 48,532,000 bushels, compared with 61,824,000 bushels last year and an average of 65,691,000 bushels in the ten preceding years. Demand has been practically up to normal, as shown by a disappearance of 49,231,000 bushels from commercial channels, compared with 33,543,000 bushels last year and a ten-year average of 51,424,000 bushels.

Cash Grain Markets.

The range of cash grain prices follows:

Kansas City—Wheat: No. 2 red, $1.13; No. 3, $1@1.12; No. 4, 98c@$1.09.

Corn—No. 2 mixed, 61½c; No. 3, 61½c; No. 2 yellow, 62@62½c; No. 2 white, 62c.

Oats—No. 2 white, 41½c; No. 3, 40@40½c.

Hay Market Firm.

Hay markets are generally reported as firm, with receipts light. Demand is limited also, but may improve with colder weather. Shortage of rain in the Southwest has broadened the demand from that section, while the size of the alfalfa surplus in Oklahoma and Kansas was cut down by the same cause. Pastures in most sections are in good condition. Prices seem more likely to go higher than lower.

Kansas City—Prairie upland No. 1, $12@12.50; No. 2, $10.50@11.50; alfalfa choice, $22.50@23; No. 1, $20.50@22; standard, $17.50@20; No. 2, $15@17; No. 1 timothy, $15@16; No. 2, $12@13; No. 1 light clover mixed, $14.50@15.50; No. 1 clover mixed, $12.50@14; straw, $8.50@9.

Fresh Eggs Scarce.

Strictly fresh eggs are extremely scarce and are selling at a big margin over the doubtful kinds. They are almost sure to become much more scarce in the next sixty days, so that there is no reason to look for a lower price range. Storage eggs are being moved out rapidly, but such a movement must continue right along to dispose of the enormous stocks.

Receipts of eggs at the four leading markets during September totalled 765,753 cases, compared with 852,763 cases last year. Storage stocks were reduced 689,561 cases during the month, compared with 361,650 cases last year. Total holding in the United States on October 1 promise to be about 8,000,000 cases, the largest on record for the corresponding date, but a decrease of over 20 per cent from the high point two months ago.

Poultry prices are weakening, but are still comparatively high. Receipts are expanding gradually, but the September total was smaller than in September last year. Demand is exceptionally broad and storage stocks did not start to increase until around October 1.

Denver—Eggs, 28@35c. Live poultry—Hens, 15c; springs, 22c; broilers, 22c; roosters, 7;c turkeys, 27c.

Butter Supply Is Light.

Receipts of butter at the four leading markets have been running slightly below normal for this season of the year. Demand remains keen, especially for the higher scores. The supply in the fresh arrivals has been insufficient and storage butter has been drawn upon freely so that storage stocks at the four leading cities are now smaller than they were last year. Based on this evidence storage stocks in the entire United States on October 1 are believed to be the smallest for that date in a number of years. Lower grades are easier to obtain and prices thereon have not been maintained in all cases, while higher scores advanced during the past week. With withdrawals from cold storage in large volume, the price at which storage operators are willing to sell is an important factor.

Prices for 92-score fresh butter on October 3 were: Chicago, 42½c; New York, 44c; Boston, 44c; Philadelphia, 45c.

Potato Shipments Continue Heavy.

Carlot shipments of potatoes are the heaviest of the year and are still increasing. The total last week appeared to be about 7,900 cars, compared with an average of 6,467 cars in the corresponding week during the three preceding years. The crop is approximately four bushels per capita, while the average crop in the preceding twenty years has been at the rate of 3.6 bushels per capita. Prices were weak at most points but Colorado f. o. b. prices advanced to 75 to 85 cents per 100 pounds for Brown Beauties. Northern round whites are quoted at $1 to $1.10 per 100 pounds in carlots at Chicago, and $1.25 to $1.55 at other midwestern markets. This level seems quite low enough to dispose of the crop.

The carlot apple movement is expanding steadily each week with about 5,000 cars shipped in the last week in September, which is below the corresponding week last year, although larger than in 1920 and 1919. Prices upon Midwestern A 2½ Jonathans are $3.50 to $5.50 per barrel in the central west, with Northwestern Jonathans at $2.25 to $2.75 per box.

The First American.

(Continued from Page 11.)

"You know, in other words, but three things concerning France—and those three are incorrect."

"But," I protested, "I have heard—"

"Let me set you aright. In the first place, the King of France is not Louis XIII, self-styled 'Louis the Just.' The real king is his Eminence, Armand Jean du Plesse, Cardinal de Richelieu. Nor is Anne of Austria the Queen of France. She is a most unhappy prisoner, spied on by both king and cardinal."

"You mean that the cardinal——"

"Here is the tale in a nut-shell. Richelieu rose like a meteor from being an obscure churchman, to become both cardinal and prime minister. The queen mother, Marie de Medici, opposed him. He had her exiled. The great nobles opposed him. He lopped off their priviledges and some of their heads; and brought them cringing about him like so many whipped curs.

"The queen opposed him. And he not only revenged himself by making the king hate and suspect her, but he keeps her under close, humiliating watch. The king is too weak to oppose him. So Richelieu rules Louis and France alike."

"But you spoke of 'parties.'"

"Quite so. Richelieu's faction is on top. The king ever and anon seeks feebly to shake off Richelieu's shackles. Courtiers join in the vain attempt. That forms another party. His majesty's brother, the Duke of Orleans, heads a third. A fourth is made up of the nobles, who, fearing to rebel, are ever hatching secret plots against his eminence. The fifth party—and the weakest of all—is the queen's."

"But how can one man—a mere car-

(Turn to Page 22.)

Recent Range of Livestock Prices at Our Principal Markets.

Cattle—	Denver.	Kansas City	Omaha.
Choice and prime heavy steers (1100 lb. up)	$.....	$10.40@11.90	$10.75@11.85
Good heavy steers	.....	8.50@10.50	8.65@10.75
Medium heavy steers	6.50@ 8.00	6.90@ 8.65	7.25@ 8.65
Common heavy steers	5.00@ 6.75	5.25@ 7.10	5.25@ 7.25
Good light steers	.....	8.10@10.25	8.40@10.65
Medium light steers	6.25@ 7.85	6.50@ 8.25	7.00@ 8.40
Common light steers	4.50@ 6.50	4.50@ 6.75	5.00@ 7.00
Common to choice butcher heifers	3.75@ 6.25	4.25@ 9.35	4.50@ 9.25
Common to choice butcher cows	3.00@ 5.35	3.50@ 6.60	3.75@ 7.25
Bologna and beef bulls	2.85@ 3.50	3.00@ 5.15	3.25@ 6.25
Canners and cutters, cows and heifers	1.75@ 3.00	2.10@ 3.60	2.25@ 3.75
Canner Steers	3.00@ 4.00	3.25@ 4.00	2.50@ 4.00
Common to choice feeders (1000 lb. up)	5.00@ 7.25	5.25@ 8.35	6.00@ 8.40
Common to choice feeders (750-1,000 lb.)	4.75@ 7.00	5.15@ 8.15	5.75@ 8.25
Common to choice stocker steers	4.00@ 6.25	4.15@ 7.90	5.00@ 8.00
Common to choice stocker cows and heifers	2.75@ 3.50	3.00@ 6.15	3.50@ 5.25
Hogs—			
Top of Market	$ 10.35	$ 10.15	$ 10.25
Bulk of Sales	9.75@10.15	9.35@10.05	7.75@10.15
Heavy (250 lb. up)	9.75@10.15	9.25@10.00	8.75@ 9.90
Medium (200—250 lbs.)	10.00@10.30	9.30@10.00	9.25@10.15
Light (150—200 lb.)	9.75@10.35	9.35@10.15	9.90@10.25
Smooth packing sows (250 lb. up)	7.50@ 8.00	7.65@ 8.60	7.75@ 8.65
Medium to choice pigs (130 lb. down)	8.00@ 9.00	.....	.....
Stock pigs	8.00@ 9.00	9.00@ 9.90	8.00@ 9.00
Sheep and Lambs—			
Medium and prime lambs 84 lb. down)	$11.50@13.75	$12.00@14.65	$12.75@14.30
Medium to choice ewes	3.50@ 5.50	4.25@ 6.50	4.00@ 6.50
Feeder lambs	12.00@13.35	11.75@13.75	12.50@14.10

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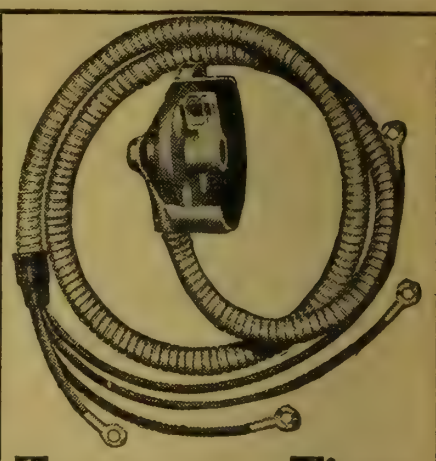

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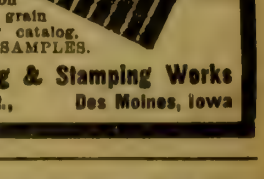

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Dairying and Hog Raising

All letters regarding commercial and technical features of dairy farming and hog production promptly answered. Address all communications to Dairy Department, Western Farm Life, Denver, Colorado.

It is difficult to determine the exact value of a purebred bull. It has been demonstrated that calves from scrub cows sired by a good purebred bull are worth $15 more a head than calves by a scrub bull from the same cows. This is a large return on the investment, but this is not all, for the dairy farmer who has put money into a registered bull will become a better dairyman. As a result of his feeding his herd better, giving better care and paying closer attention to the business, he will reap an additional reward which may be credited to the purebred bull. It is well said that a purebred bull is a great educator.

Utility Points in Cows.

Even the most expert judges of dairy cattle cannot pick the high producers from among ordinary cows without occasionally making a mistake. There are, however, certain points about milk cows that are always associated with high production. Dairymen should make themselves familiar with these points, for upon their ability to pick out the good cows may depend their success in the business.

The udder of a good producer should be deep, wide and long with good attachments. It should be evenly developed, level on the bottom line and have teats of good and uniform size, symmetrically placed. It should also be soft and pliable, indicating that it consists of secreting cells rather than flesh.

A good set of milk veins indicates that the udder is well supplied with blood. Long, crooked milk veins entering large wells or opening through the body wall are usually associated with high production.

A cow cannot be a maximum and continuous producer unless she has a strong constitution. Vitality and strength of constitution are indicated by broad, open nostril, and a chest which is deep and broad.

Feed capacity is essential. In order to produce heavily a cow must consume large quantities of feed and water. A barrel which is long, broad and deep indicates a large capacity and good production. A large cow nearly always has the advantage in production, provided she is not deficient in other points.

Alertness in temperament is an asset, and a sluggish cow is seldom a high producer. Dairy temperament includes those characteristics which indicate that the cow's feed is used for the production of milk rather than for body fat. Angularity, prominent points, lack of heaviness and flesh, and the presence of the triple wedges are good indications.

Quality refers to the handling or pliability of the hide, the refinement of bone, and the character of the animal, which cannot be described but which have to be seen to be appreciated.

Complete Victory in Wisconsin.

The National Milk Producers' Federation has been advised by Hoard's Dairyman that the filled milk interests will not attempt to appeal the decision of the Wisconsin Supreme Court upholding the law that prohibits the manufacture and sale of such compounds within the state. The attorney for the Hebe and Carnation companies have also withdrawn their motion for a rehearing of the case.

Communications received by the Federation point to renewed efforts for state prohibitory laws in six or seven states next year when the legislatures convene.

Report on the Federal anti-filled milk bill, which passed the House, has been delayed because of the absence in Europe of Senators Ladd and McKinley, who went to Geneva, Switzerland, to attend an international conference on Parliamentary Procedure. The Voight bill, however, will not lose its status on the calendar, as the Sixty-seventh Congress does not officially end until next March.

Light Hogs Gain More Cheaply.

Most hog feeders have learned from experience that the heavier hogs get the more grain it requires for a pound of gain. This conclusion is borne out in a feeding experiment conducted at the Missouri experiment station the summer of 1921. Pigs weighing 100 pounds were used in the test. The feed was corn, shorts, and tankage, and they were fed to a weight of 300 pounds. One of the pigs was killed and its carcass analyzed at the beginning of the test and another when they weighed 200 pounds, and one at the end, when the average weight was 300 pounds. All were fed and handled alike and a careful record kept of feed consumed.

From the initial weight of 100 pounds to 200 the pigs required an average of 4.3 pounds of grain to each pound of gain. In making the whole gain of 200 pounds it required 5 pounds of grain to each pound of gain.

The analysis of the carcasses of the hogs slaughtered showed that with increase in weight more grain was required for each pound of lean meat produced, and less feed for each pound of fat. In growing from 100 pounds to 200 pounds, 10.8 pounds of feed was consumed to each pound of fat produced, while 9.3 pounds of feed was required for each pound of fat in going from 100 to 300 pounds.

In making the gain from 100 to 200 pounds 12.5 pounds of feed was required for each pound of lean meat produced, while in going from 100 pounds to 300 pounds, it required 20 pounds of feed for each pound of lean meat.

The results of this test emphasize the fact that hogs tend to produce lean meat most economically before reaching 200 pounds in weight, and that they lay on fat more economically when approaching 300 pounds in weight.

Idaho Bull Club Starts Business.

Ten purebred Holstein bulls to serve eighty-seven herds of Franklin county, Idaho, were distributed last June at the town of Preston. This move will, in a few years, make this section a real dairy county. The organization has the backing of the bankers and business men of the towns, and the dairymen feel that they are entering on a period of progress that means more system to their farming operations and better livestock.

County Agent M. A. Powell deserves a great deal of credit for the manner in which the campaign was conducted. Valuable assistance was given him by Prof. F. W. Atkeson, F. R. Cammack of the University of Idaho, and H. A. Mathiesen of the Western Office of the Dairy Division. The officers of the association are: John P. Neilsen, president; Wm. Durrant, vice president, and Demar Neilsen, secretary-treasurer. The bulls are excellent specimens of the breed and from dams producing 500 pounds of butterfat or more per year.

This county now has more bulls owned co-operatively than any other county in the western states, and these ten blocks now in operation will be increased to fifteen in the near future. This will give the dairymen ten years of breeding and we can get a fair idea of what this means in the improvement of the livestock when we know that at the end of ten years all of the last generation will be 31/32 pure blood even on mongrel cows.—J. E. Dorman.

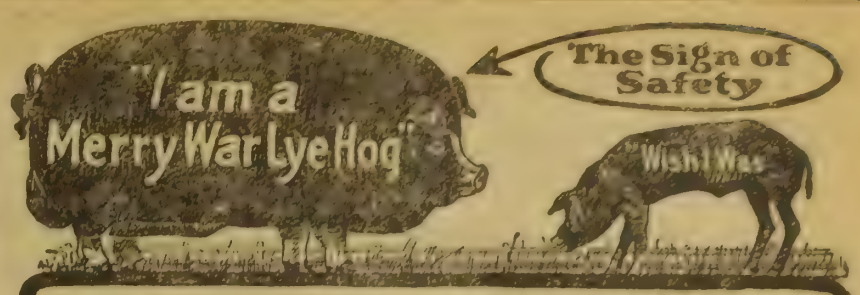
Market Hay and Grain Through Livestock.

To get the largest returns from your hay and grain, first have some good cows, says Harold Lascelles, fieldman of the Colorado State Dairy Commission. Then market the feed through the cows and hogs. Market your hay and silage through cows. Market the straw by using it for bedding in the winter. Haul the manure out on the fields to grow more and better grain, hay and silage for more and better cows.

And in the meantime, points out Mr. Lascelles, get a weekly cream check for your cream and feed the skim milk to the hogs, and watch your savings account grow. A little brain work along with hand labor helps most workers. If it is worth $1.50 for some one else to buy your oats, it is worth $1.50 for you to keep them and feed them to some good cows, for dairying, when properly done, is the most permanent and reliable source of income on the farm.

Find Just What You Want.

Whenever you are in need of anything for your farm, ranch or household, and do not know where to buy it, look over the Farmers' and Stockmens' Ready Reference Directory in this issue. There you will find almost everything under the sun offered for sale by reliable firms that will treat you right in both price and service.



Feed Your Hogs MERRY WAR LYE

HOGS eat better when a little MERRY WAR LYE is mixed with their feed—and you know it takes appetite to make meat and fat. MERRY WAR LYE also tends to reduce acidity of feed—helps build up the resistance of hogs to certain diseases and helps tone them up. Thin, scrawny, sickly hogs usually improve quickly when fed MERRY WAR POWDERED LYE—even healthy hogs do better. Costs little to feed—120 feeds in every can—pays for itself many times over.

Directions For Feeding

Thoroughly dissolve a tablespoonful of MERRY WAR POWDERED LYE in a little water and mix well with feed for ten hogs or thoroughly dissolve HALF a can in water and mix with a barrel of feed. Stir well and feed night and morning. If on dry rations thoroughly dissolve HALF a can of MERRY WAR LYE in each barrel of drinking water. Follow directions carefully.

For years hog raisers have been feeding MERRY WAR LYE—they know what it will do. Profit by their experience—feed your hogs MERRY WAR LYE.

Look For The Picture of The Hog on The Label

It Is The Sign of Safety You will find it only on "MERRY WAR" —safe Lye for hogs.

Sold by Grocers, Druggists and Feed Dealers

E. MYERS LYE CO. *Established 1888.* St. Louis, Mo.

MERRY WAR LYE

SELL YOUR MILK--FEED A&C CALF MEAL

SATISFACTION GUARANTEED
OR MONEY REFUNDED

We want you to give A. & C. calf meal a fair trial. WE KNOW it will raise better calves for one-third what your milk sells for. TO PROVE IT TO YOU we want you to order 100 pounds. Any time within thirty days if you are not convinced that it will do everything we claim, we will return your money.

WE WILL SHIP DIRECT TO YOU
if your dealer does not handle it. WRITE TODAY

COSTS ONLY 1/3 WHAT YOUR MILK SELLS FOR

ADY & CROWE MER. Co. 1900 15TH STREET DENVER, COLO.

MICA AXLE GREASE

lightens the load, lengthens the life of the wagon, harness and horse—prevents wear and "play", eliminates squeaking. A small quantity of it goes a long way.

Mica Axle Grease is a modest product but it does a lot. Don't be without a can of it, and keep it handy. It is false economy to skimp on axle grease. And you may as well use the best, costs no more.

Sold in 1 and 3-pound tins, 10 and 25-pound galvanized pails. Your dealer has it.

THE CONTINENTAL OIL COMPANY
(A Colorado Corporation)

Butte, Cheyenne, Albuquerque, DENVER, Boise, Pueblo, Great Falls, Salt Lake City

Color Your Butter

"Dandelion Butter Color" Gives That Golden June Shade and Costs Really Nothing. Read!

Before churning add one-half teaspoonful to each gallon of cream and out of your churn comes butter of Golden June shade to bring you top prices. "Dandelion Butter Color" costs nothing because each ounce used adds ounce of weight to butter. Large bottles cost only 35c at drug or grocery stores. Purely vegetable, harmless, meets all State and National food laws. Used for 50 years by all large creameries. Doesn't color buttermilk. Tasteless. Wells & Richardson Co., Burlington, Vt.

FREE BOOK on CONTAGIOUS ABORTION

Describes cause, effects and treatment; tells how farmers in all parts of U. S. are stopping the ravages of this costly malady.

Write for free copy today.

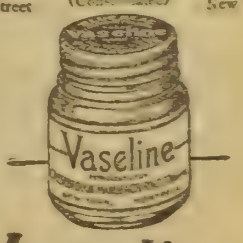
ABORNO LABORATORY
58 Jeff Street, Lancaster, Wis.

Recommended

"Vaseline" Petroleum Jelly benefits all bumps, sores, bruises, sunburn, blisters, cuts and chafed skin.

Never be without a bottle of it in the house. It's safe, always effective and costs but a trifle.

CHESEBROUGH MANUFACTURING CO.
State Street (Consolidated) New York



Vaseline
Reg. U.S. Pat. Off.
Petroleum Jelly

Farmers' and Stockmens' Exchange

Advertisements will be inserted in this department for 7c per word; four or more consecutive insertions, 5c a word each insertion. Remittances can be made by postoffice money order or personal check. Every figure and initial counts as one word. Guaranteed circulation 55,000 copies each issue. Send us a trial advertisement. Write for proof showing how these columns pay advertisers.

HELP WANTED

RAILWAY MAIL, GOV'T CLERKS AND CARriers needed; steady work. Particulars of examinations free. Write Mokane, Dept. B-11, Denver, Colo.

EARN $110 TO $250 MONTHLY, EXPENSES paid, as Railway Traffic Inspector. Position guaranteed after three months' spare time study or money refunded. Excellent opportunities. Write for free Booklet G-142. Stand. Business Training Inst., Buffalo, N. Y.

AMBITIOUS MEN—WRITE TODAY FOR ATtractive proposition, selling subscriptions to America's most popular automobile and sportsman's magazines. Quick sales. Big profits. Pleasant work. Digest Publishing Co., 9659 Butler Bldg., Cincinnati, Ohio.

HUNDREDS U. S. GOVERNMENT POSITIONS continually open to men-women over 17; $92—$190 month. Quick, steady raise; paid vacation; no strikes; steady work; short hours. Common education sufficient, "pull" unnecessary. Write immediately for list positions. Franklin Institute, Dept. J 123, Rochester, N. Y.

FOLLOW THE DOLLARS—$50 TO $100 PER week, the money yours; something new, not an old, worn-out proposition; field untouched; experience unnecessary; takes everybody by storm; money rolls in; show 50, sell 40; demonstrated in one minute; sells on demonstration; the new Inkless Fountain Pen, the twentieth century wonder; never leaks or spills; with this pen no more use for the ink bottle; sample pen 50c; this proposition is 18 karat; money back if not as represented; agent's profit 200 per cent; exclusive territory; send for agency today. Inkless Fountain Pen Co., 1522 Eighth st., Des Moines, Ia.

POSITION WANTED.

POULTRYMAN, 33, GRADUATE, 15 YEARS' EXperience, successful in all branches; capable of taking full charge. Good references; state salary and living conditions in first letter. F. K. Hoyle, McClave, Colo.

FARMS AND RANCHES

I WANT FARMS AND LAND FOR CASH BUYers; will deal with owners only. R. A. McNown, 334 Wilkinson Bldg., Omaha, Neb.

SELL YOUR PROPERTY QUICKLY FOR CASH, no matter where located. Particulars free. Real Estate Salesman Co., Dept. 11, Lincoln, Neb.

WANTED—TO HEAR FROM OWNER HAVING farm for sale; give particulars and lowest price. John J. Black, 33rd St., Chippewa Falls, Wis.

MEXICO'S WEST COAST—FINE FARMING lands, $2 to $10 per acre. Two crops of corn per year, cantaloupes and tomatoes are six weeks ahead of other markets. Fine grazing. Snap—750 acres level land three miles from town. Mexico Mines & Land Company, Mocorito, Sinaloa, Mexico.

FOR RENT—ONE OF THE BEST AND HIGHLY improved 200-acre irrigated dairy farms in Colorado, six miles from Denver on Morrison road; 350-ton silo, artesian well, water piped to house and cow barn; for term of years to responsible party, for cash or shares. Farmer must have good outfit. If you can not quality, please don't answer. M. Mareenov, 2459 W. 38th Ave., Denver, Colo.

FARM FOR SALE—SEVENTY-THREE ACRES, irrigated, well improved, one and one-half miles from Mitchell, Neb., forty rod from Great Western Sugar Factory; excellent soil; under one of best irrigation ditches in Nebraska. Good feeding location. Price $15,000; will carry back half secured on farm. No trade considered. Write for particulars. Address R. E. Gifford, Mitchell, Neb.

$1,000 SECURES MISSOURI FARM, 160 ACRES, with season's crops, 15 cattle, 6 hogs, 3 mules, mare, poultry, tools included; on state road, prosperous farmers all around; near R. R. station; city markets; heavy cropping tillage, 20-cow pasture; estimated 4,000 cords stovewood; 20 apples, 25 peaches, 18 plums, 14 apricots; good cottage, barn, poultry house, piggery, etc. To settle affairs, $3,500 takes all; only $1,000 needed. Details page 76, New Illus. Catalog 1,200 Bargains Free. Strout Farm Agency, 831 BA, New York Life Bldg., Kansas City, Mo.

IRRIGATED FARMS NEAR DENVER—GOING TO California and will close out at very low price and easy terms, several improved farms under good ditches, 20 to 30 miles of Denver and near railroads.

142 acres, one mile to depot, elevator and beet dump, rural route and milk route by the door. All under ditch, good water right; new six-room house; barn and outbuildings; half in alfalfa, 10 acres pasture with running water, no seepage. Refused $250 per acre two years ago, but price now $150 per acre; $2,500 cash, balance easy terms. Possession this fall.

80 acres irrigated, 5-room house, barn, good well; half mile to school, 3½ miles to town; all level, all in crop; no waste; rural route and milk route by the door. Cheap pasture land with running water across road, can be rented cheap. Fine dairy proposition. Price $125 per acre; $1,500 cash, balance easy terms. Possession this fall.

Also 160 acres, 320 acres, 107 acres, 105 acres, all irrigated, for sale cheap. Chas. O. Elwood, Owner, 415 Ideal Bldg., Denver, Colo.

LIVE STOCK

CATTLE.

RANGE BULLS—REGISTERED HEREFORDS and Shorthorns. The Lowell Purebred Cattle Co., Union Stock Yards, Denver.

WHY PAY MORE? PUREBRED REGISTERED Holstein heifer calves, $50. Circulars free. Cardinet Holstein Farm, West Chester, Ohio.

HEREFORD BULLS—ABOUT TWENTY OF THE best marked and bred Anxiety bred yearling bulls at prices that will move them quickly. Address J. O. D. Ranch, Aroya, Colo.

FOR SALE—FIVE MONTH-OLD PURE AND high bred Belgian Freeman bull calf; from a registered bull and a real cow. Sire calf and dam Eastvold Farm, South Federal Blvd. Entrance north Loretto Academy. Phone Eng. 151. J. Sorra, Route 6, Box 117, Denver, Colo.

HOGS.

CLASS REGISTERED DUROC BOARS BY Great Giant Sensation. Delbert Hawkins, Peetz, Colo.

BIG-TYPE POLAND CHINAS, BOTH SEXES, ALL ages. Write for prices and breeding. Gad Barney, Haswell, Colo.

BLUE HOGS—ACTUALLY BLUE IN COLOR; large, growthy and prolific; fancy show hog; all stock pedigreed; registered in purchaser's name. Blue Hog Breeding Co., Wilmington, Mass.

SHEEP.

RAISE KARAKUL SHEEP, PRODUCING PERsian lamb Astrakhan fur. Two lambings yearly. Bear Creek Investment Co., Hoff-Schroeder, 1545 Welton St., Denver, Colo.

MILCH GOATS.

SWISS MILCH GOATS, HIGH-GRADE STOCK; milking from three to five quarts; also young stock. Frank Rauchfuss, R. D., Edgewater, Colo.

PET STOCK

TRAINED COLLIES AND ENGLISH SHEPHERDS $10. M. Lewis, Miller, Nebr.

RUSSIAN WOOLFHOUNDS FOR SALE—BIG, heavy-boned stock; genuine killers; just the dog if pestered with coyotes or wolves, yet kind and gentle for domestic purposes. Claud Cardall, Provo, Utah.

POULTRY

RHODE ISLAND REDS.

ROSE-COMB RHODE ISLAND RED COCKERELS—exhibition stock, $3, $5, $7. Mrs. B. Dougherty, Norwich, Iowa.

WYANDOTTES.

WHITE WYANDOTTE COCKERELS AND PULlets; show stock at two cockerels for $5, three pullets for $5. Mrs. B. Dougherty, Norwich, Iowa.

ANCONAS.

SHEPHARD'S STRAIN ROSE AND SINGLEComb Ancona cockerels, $1, 2; no pullets. Leslie Chrestensen, Akron, Colo.

ORPINGTONS.

BUFF ORPINGTONS—BUY YOUR COCKERELS now and save half; $2 to $5 each. C. H. Drage, 675 W. 3rd St., Loveland, Colo.

SEVERAL VARIETIES.

NINETY BREEDS—POULTRY, EGGS, PIGEONS, dogs, baby chicks, parrots, ferrets, hares. Complete free folder. Bergey's Poultry Farm, Telford, Pa.

SEEDS

99.50% PURE ALFALFA SEED, $16.50 HUNdred, germination almost 100%. Red Clover, $18; Sweet Clover, $8.50; Timothy, $5.50; Grimm alfalfa, $30. Meier Seed Company, Salina, Kan.

LUMBER

FIR LUMBER, MILLWORK, RED CEDAR SHINgles, fence posts, from mills to you. Send bill for delivered prices. Lansdown, Box 909M, Everett, Wash.

MISCELLANEOUS

LEARN MECHANICAL DENTISTRY—WRITE Cross Prosthetic Clinic, Majestic Bldg., Denver.

INVENTIONS WANTED—CASH OR ROYALTY for ideas. Adam Fisher Mfg. Co., 204, St. Louis, Mo.

BEST PARCHMENT BUTTER WRAPPERS, 8x11, neatly printed, 100, 60c; additional 100, 40c. Home Specialty Co., Middleton, Idaho.

CABBAGE AND VEGETABLE CUTTER—SIX knives, prepaid, $1; three for $2. One free to secretary Ladies' Aids. Lusher Bros., Elkhart, Ind.

FORD OWNER—YOUR CYLINDERS OIL UP? Spark plugs quit firing? Stop it. Send $1 for information. Cofer Bureau, 30 Second Avenue, Long Branch, N. J.

SCENARIOS WANTED—DIRECT STUDIO SERvice; membership now open to talented amateurs. Address Sec. American Screenwriters' Society, 5821 Santa Monica Blvd., Hollywood, Calif.

SEND FOR OUR WHOLESALE WEEKLY PRICE lists; it will keep you posted on the rock-bottom prices, and will help you save from 25 to 40 per cent on your supplies. Stock Growers Wholesale Supply Co., 1523 19th St., P. O. Box 1442, Denver, Colo.

PATENTS—BOOKLET FREE. HIGHEST REFerences. Best results. Promptness assured. Send model or drawing for examination and opinion. Watson E. Coleman, Patent Attorney, 624 F St., Washington, D. C.

LET US TAN YOUR HIDE—COW AND HORSE hides for fur coats and robes. Cow and steer hides into harness or sole leather. Catalog on request. We repair and remodel worn furs; estimates furnished. The Crosby Frisian Fur Co., Rochester, N. Y.

NOW IS THE TIME TO ENTER BUSINESS—Our position calls have increased 50 per cent over last year. Write for 56-page catalog, mailed free. Barnes Commercial School, 1625-45 Champa St., Denver. Largest business school in Rocky Mountain region. Begin at any time.

AUTOMOTIVE TRADES TAUGHT—DENVER INstitute of Technology guarantees satisfaction teaching following trades: Automobile and tractor repair, automotive electricity, storage batteries, welding, vulcanizing; 15 years' experience. Write for booklets. Y. M. C. A., Denver.

NURSES TRAINING SCHOOL—PARK AVE. HOSpital, Denver, Colo., offers a thorough training to young women desirous of becoming professional nurses. This is a fully accredited school. Course is three years. During training students receive full maintenance, tuition and all uniforms; also money allowance of $6 per month to cover other hospital needs. Apply Supt. of Nurses, Park Ave. and Humboldt Sts., Denver, Colo.

HONEY.

"THEBESTO ROCKY MOUNTAIN HONEY," none better; satisfaction guaranteed or money back; five pound can, postpaid $1.50. Send remittance with order. Write for price on large quantities. The Colorado Honey Producers Association, Denver, Colo.

State Fair Awards.

(Continued from Page 22.)

marked an improvement been made in recent years as in the showing of Durocs and Poland Chinas. Much of the credit this year was due to breeders from Nebraska, who carried away the major share of the honors in both breeds. Rainbow Sensation, grand champion of last year's show, was again on hand to claim the same honor. He has made a remarkable growth during the year, yet still retains the superior smoothness and well balanced carriage that made him in truth the sensation of the swine division. He is owned by Ora Ayers of Orleans, Neb., who also carried away a goodly share of premium money on the get of his great herd-header.

V. A. Briggs & Son of Seward, Neb., in their first showing in Colorado, proved their ability as veteran producers of blue ribbon winners by carrying away a major share of the money in the yearling and pig classes and the groups.

All classes were well filled with the offering from twenty-five of the best Duroc herds in Colorado and Nebraska and the four money prizes awarded were not sufficient to include the animals that were really worthy of prize money in any fair.

Clark & Pratt, two young men from Beaver Crossing, Neb., both of whom made their start in hog breeding through boys' and girls' pig club work, proved the worth of their Poland Chinas by showing them to the tune of twelve firsts, eight seconds, six thirds, three fourths and six minor places in both open classes and the futurity. The Poland China herd of A. D. McGillvray, veteran breeder of Boulder, Colo., was also well represented and his herd sire, Max Avalanche, was a well received grand champion.

The Duroc Jerseys.

Exhibitors—R. I. Love, Colorado Springs, Colo.; I. C. Bradley, Fort Collins, Colo.; Ora Ayers, Orleans, Neb.; H. C. Luther, Alma, Neb.; Lawrence Collins, Golden, Colo.; V. A. Briggs & Sons, Seward, Neb.; Thomas & Davidson, Las Animas, Colo.; Range View Stock Farm, Henderson, Colo.; Colorado Agricultural College, Fort Collins, Colo.; State Reformatory, Buena Vista, Colo.; Kingsley Herd, Minden, Neb.; F. D. Crow, Rocky Ford, Colo.; Ross R. Crow, Rocky Ford, Colo.; O. H. Crow & Son, Rocky Ford, Colo.; Blue Ribbon Live Stock Co., Pueblo, Colo.; W. L. Stone & Son, Pueblo, Colo.; Roth Banning Lewis, Colorado Springs, Colo.; Brauer Purebred Duroc Co., Colorado Springs, Colo.; C. T. White & Sons, Lexington, Neb.; Rocky Ford Duroc Co., Rocky Ford, Colo.; Pueblo County Farm, Pueblo, Colo.; Stone & Cushman, Pueblo, Colo.; Clark & Pratt, Beaver Crossing, Neb.; Frances Ratcliffe, Henderson, Colo.; Jesse Powers, Henderson, Colo.

Judge—L. A. Weaver, Columbia, Mo.

Aged boar—1, Ayers; 2, Briggs & Son; 3, Lewis; 4, Blue Ribbon Livestock Co.

Senior yearling boar—1, Colorado Agricultural College; 2, Blue Ribbon Co.; 3, Luther; 4, O. M. Crow.

Junior yearling boar—1, Love; 2, Ayers; 3, Briggs & Son; 4, Stone & Son.

Senior boar pig—1, Rocky Ford Duroc Co.; 2, Luther; 3, White & Son; 4, Colorado Agricultural College.

Junior boar pig—1, Briggs & Son; 2, 3 and 4, Colorado Agricultural College.

Aged sow—1, Briggs & Son; 2, Ora Ayers; 3, Colorado Ag. College; 4, Blue Ribbon Co.

Senior yearling sow—1, Briggs & Son; 2, Crow; 3 and 4, Ayers.

Junior yearling sow—1, 2, 3 and 4, Briggs & Son.

Senior sow pig—1, Briggs & Son; 2, Colorado Ag. College; 3 and 4, Luther.

Junior sow pig—1, Clark & Pratt; 2, 3 and 4, Briggs.

Senior champion boar—Ayers, on Rainbow Sensation. Reserve—Briggs on Super Sensation.

Junior champion boar—Rocky Ford Duroc Co., on Yaqui. Reserve—Briggs, on Super Sensations' Honor.

Grand champion boar—Ayers, on Rainbow Sensation.

Senior champion sow—Briggs, on Major Sensation Princess. Reserve—Briggs, on Big Bone Giantess 8th.

Junior champion sow—Clark & Pratt, on Lady Sensation.

Grand champion sow—Briggs, on Major Sensation Princess.

Aged herd, owned by exhibitor—1, Briggs; 2, Ayers; 3, Blue Ribbon; 4, C. A. C.

Aged herd, bred by exhibitor—1, Briggs; 2, Ayers; 3, Blue Ribbon; 4, Stone & Sons.

Young herd, owned by exhibitor—1, Briggs; 2, Luther; 3, C. A. C.; 4, Blue Ribbon.

Young herd, bred by exhibitor—1, Briggs; 2, Luther; 3, C. A. C.; 4, Blue Ribbon.

Get of sire—1, Ayers; 2, Briggs; 3, Luther; 4, C. A. C.

Produce of Sow—1, Briggs; 2, Ayers; 3, Luther; 4, Blue Ribbon.

Duroc Jersey Futurity.

Fall boar pig—1, Rocky Ford Duroc Co.; 2, Luther; 3, White & Sons; 4, C. A. C.; 5 and 6, Crow; 7 and 8, Kingsley Herd.

Fall sow pig—1, Briggs; 2, C. A. C.; 3, 4 and 5, Luther; 6, Kingsley Herds; 7, Crowe; 8, Stone & Son.

Fall litter of four—1, Luther; 2, Blue Ribbon; 3, Kingsley Herds; 4 and 5, Crowe.

Spring boar pigs—1 and 4, Briggs; 2, 3 and 5, C. A. C.; 5, Stone; 6, Kingsley Herds; 7, Blue Ribbon.

Spring sow pigs—1, 2 and 3, Briggs; 4 and 7, Crowe; 5, Ayers; 6, Luther; 8 Blue Ribbon.

Spring litter of four—1 and 2, Briggs; 3, C. A. C.; 4, Crowe; 5, Ayers; 6, Blue Ribbon; 7, Kingsley; 8, Ross Crowe.

Poland China Hogs.

Exhibitors—C. U. Yearius, Ft. Morgan, Colo.; E. E. Johnson, Ft. Morgan, Colo.; Mountain View Stock Farm, East Lake, Colo.; W. S. Hill & Son, La Porte, Colo.; Fletcher Bros., Lamar, Colo.; Clark & Pratt, Beaver Crossing, Neb.; Edmund Webb, Longmont, Colo.; Colorado Agricultural College, Ft. Collins, Colo.; A. D. McGillvray, Boulder, Colo.; John Johanessen, Minden, Neb.; T. F. Simpson, Manzanola, Colo.; C. W. Henry, Greeley, Colo.; J. J. Hotzel, Boone, Colo.; W. B. Morna, Heartwell, Neb.; R. B. Crozier, Rye, Colo.; Lee H. Fesenmeyer, Ft. Morgan, Colo.

Judge—L. A. Weaver.

Aged boar—1, McGillvray; 2, Johannessen; 3, Webb.

Senior yearling boar—1, Clark & Pratt; 2, Fletcher Bros.

Junior yearling boar—1, Colorado Agricultural College; 2, Hotzel.

Senior boar pig—1 and 2, Clark & Pratt; 3, C. A. C.; 4, McGillvray.

Junior boar pig—1, W. S. Hill & Son; 2, Henty; 3 and 4, Clark & Pratt.

Aged sow—1, Johannesen; 2 and 3, C. A. C.; 4, Johnson.

Senior yearling sow—1, Clark & Pratt.

Junior yearling sow—1 and 3, Clark & Pratt; 2 and 4, McGillvray.

Senior sow pig—1, 2, 3 and 4, Clark & Pratt.

Junior sow pig—1, Simpson; 2, 3 and 4, McGillvray.

Senior and grand champion boar—McGillvray, on Max Avalanche.

Junior champion boar—Clark & Pratt.

Senior and grand champion sow—Johannesen, on Captivator Gem.

Junior champion sow—Clark & Pratt.

Aged herd, owned by exhibitor—1, McGillvray; 2, Clark & Pratt; 3, Johannesen; 4, C. A. C.

Aged herd, bred by exhibitor—1, Clark & Pratt; 2, C. A. C.

Young herd, owned by exhibitor—1 and 4, Clark & Pratt; 2, Henry; 3, C. A. C.

Young herd, bred by exhibitor—1 and 2, Clark & Pratt; 3, C. A. C.; 4. McGillvray.

Get of sire—1 and 2, Clark & Pratt; 3, McGillvray; 4, Henry; 5, Hill.

Produce of sow—Same as get of sire.

Poland China Futurity.

Senior boar pigs—1 and 2, Clark & Pratt; 3 and 5, C. A. C.; 4, McGillvray.

Senior sow pigs—1, 2, 3, 4, 7 and 8, Clark & Pratt; 5, Simpson; 6, 9, 10, C. A. C.

Junior boar pigs—1 and 7, Hill & Son; 2 and 3, Clark & Pratt; 4, 5 and 6, C. A. C.; 8, Webb.

Junior sow pigs—1, 2 and 3, McGillvray; 4, Clark & Pratt; 5 and 6, Hill & Son; 7, C. A. C.; 8, Simpson.

Senior pig litters—1, Clark & Pratt; 2, C. A. C.

Junior pig litter—1, Hill & Son; 2, Clark & Pratt; 3 and 7, McGillvray; 4 and 5, C. A. C.; 6, Simpson; 8, Webb.

Hampshire Hogs.

The list of exhibitors and the awards follow:

John T. Morrison, Sterling, Colo.; D. B. Prouse, Las Animas, Colo.; Thomas Bros., Las Animas, Colo.; Geo. F. Frink, Ft. Lupton, Colo.

Judge—L. A. Weaver.

Aged boar—1, Frink.

Junior yearling boar—1, Frink; 2 and 3, Thomas Bros.

Senior boar pig—1, Frink.

Junior boar pig—1, Prouse; 2, Thomas; 3 and 4, Frink.

Aged sow—1 and 2, Frink.

Senior yearling sow—1, Frink.

Junior yearling sow—1 and 2, Frink.

Senior sow pig—1 Frink; 2, Prouse.

Junior sow pig—1, 2and 4, Frink; 3, Thomas.

Senior and grand champion boar—Frink.

Junior champion boar—Prouse.

Senior, junior and grand champion sow—Frink.

Aged herd and young herd—Frink.

Get of sire and produce of sow—Frink.

(Other hog awards, and sheep and horse awards in next issue.)

Do You Prefer to Buy From Mail-Order Houses or Your Home Town Stores, and Why? You Can Earn $2.00.

For the 100 best answers to the above question, we will pay $2.00 each. This question is advertised so we may know best how we can make our unusual offer of two regular $1.00 packages of LAYMORE (makes hens lay in fall and winter) for only $1.00 for the two packages. Replies to the questions (and orders also) are to be sent to the MAYER COMPANY, Dept. 15, Minneapolis, Minn. LAYMORE, it will be remembered, produced 540 eggs from a flock of 20 hens.

TRAPPERS' POISON.

GOES' LIQUID POISON CAPSULES KILL FUR animals on the spot; seventeenth season in use with excellent results. I send free circulars. Mention this paper. Edmund Goes, Milwaukee, Wis. Station C.

TOBACCO.

FREE TOBACCO—WRITE FOR SAMPLE OF Kentucky's best smoking tobacco. Hawesville Tobacco Co., Hawesville, Ky.

NATURAL LEAF TOBACCO—CHEWING, 5 LBS. $1.75; 10 lbs., $3. Smoking, 5 lbs., $1.25; 20 lbs., $3.50. Send no money. Pay when received. Tobacco Growers' Union, Paducah, Ky.

HOMESPUN TOBACCO—CHEWING, 5 POUNDS, $1.75; 10 pounds, $3; 20 pounds, $5. Smoking, 5 pounds, $1.25; 10 pounds, $2.00; 20 pounds, $3.50. Send no money, pay when received. Co-Operative Tobacco Growers, Paducah, Kentucky.

ARMY GOODS.

SALVAGE AND SURPLUS SALE OF ARMY goods. Post Army Store, 921 18th St., Denver, Colo. Write for price list.

SALVAGE AND SURPLUS SALE OF ARMY goods. Denver Army Store, 1443 Larimer st., Denver, Colo. Write for price list.

The First American.

(Continued from Page 20.)

dinal—rule France, when——"

"How does one puny lion-tamer govern a whole cageful of wild beasts? In Richelieu's case, the 'beasts' are forever stirring up new conspiracies against him, but as each plot matures, the cardinal discovers and crushes it. I know not how. That is part of his genius—and his spy system."

"You speak bitterly of him."

"Not I! You should listen to those who hate him. I do not; albeit I am here by his orders. His eye is everywhere, A month ago his eminence sent for me and said:

"You are gambling and keeping low company. In my youth your father once did me a service. To reward him, I shall put you where you will learn the folly of evil living. For two months you shall cool your spurred heels in the Bastile. Then I shall send you back,

Whowell & Polley Sale, Johnstown, Colo.

Complete Dispersal Sale

— of —

Holstein-Friesian Cattle

To be held at Johnstown, Colo.,

November 22, 1922

THIS IS PROBABLY THE BEST HERD IN THE STATE OF COLORADO AND WILL BE ONE OF THE LARGEST SALES IN THE WEST This Year

This herd is one of the highest producing herds in the fourteen western states doing association work. We have been testing for the past two years and have made some very good records, as our catalogue will show, cows going as high as 32½ lbs. for seven days; and 1,000 lbs. for 365 days; 20,000 lbs. milk for 305 days, etc.

We aim that this herd of some 80 head shall be sold in the best working condition possible. Every animal must sell.

There will be some 8 or 10 head of good bulls from cows making 20 to 32½ lbs. butter in seven days.

Senior Sire, JOHANNA FAYNE LONGFIELD KORNDYKE, No. 254416.
Junior Sire, SIR JOHANNA DE COLANTHA FAVORITE.

A large part of this offering is sired by this senior and bred by this junior sire. Both of these sires will be sold in this sale.

Ruth Battles Pietertje 3rd, one of the best cows of this herd, weighing at this time 2,000 pounds.

Johanna Rue Wayne 3rd holds the seven-day state record for milk, producing 743.3 pounds.

If interested in good cattle, get your name on our mailing list for catalogue, which will be ready November 1, 1922.

35 A. R. O. cows and a wonderful lot of young heifers.

HERD UNDER FEDERAL SUPERVISION.

Address all mail to

WALTER B. POLLEY, Manager
JOHNSTOWN, COLO.

C. N. HENRY, Fieldman for Western Farm Life.

cured, to Gascony.' A whole month more. Heigho!"

"Then, being without friends or influence in any party, I seem like enough to pay for my display of swordsmanship with my life. I should grudge it less had I not been tricked into the affair. Tell me, is the Marquis des Ems a man of power?"

"Des Ems! There are not ten men in all France with higher influence. If it was with him you fought——"

A clank of bolts—and the cell door swung open. A turnkey stood on the threshold.

"M. Mallock!" he ordered, "to the governor's office."

"It seems my fate is not long left in doubt," I muttered.

Pressing my gay new acquaintance's hand, I left the cell and followed the turnkey's clumping steps down the arched passageway. Once more, apparently, I was about to come to grips with Destiny.

(To be continued.)

LIVESTOCK NOTES.

Hall Brothers' Sale.

Hall Brothers' complete dispersal sale of Holstein Fresian cattle will be held at the Western Holstein Farm, 5½ miles southwest of Denver on the Morrison road, on Monday, November 20, 1922. The sale will consist of 65 females, mostly all under 5 years of age. I would like for all the readers of Western Farm Life to be able to see this fine offering of cattle. Daughters of some of the best bulls ever in the west.

While no tests have been taken for two years on this farm, they are a real producing herd. Herd Federal tested. For catalog address Hall Brothers, South Denver Station, Denver, Colo.

El Paso County Sale and Show.

The El Paso county sale of Holstein cattle and some good hogs of different breeds were sold at Fountain on October 5, the last day of the fair, and some good stock found new homes and surely will make good.

The Blue Ribbon Duroc Sale.

The sale held at Pueblo State Fair grounds on September 12 was attended by a fair-sized crowd and while the prices were not high, a very useful lot of hogs were sold and will make the purchasers money and the owners were game enough to take the prices.

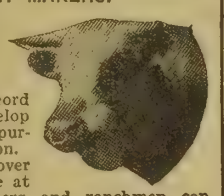
One litter of futurity pigs were sold and reserved to show at the fair and were good enough to be in the money.

Lot 34, a boar of the litter, went to head the herd of Otis Crow & Sons at Rocky Ford, and is a real prospect, as he was good enough to win at the State Fair.

C. W. Snook of Greeley was the auctioneer and worked hard for the success of the sale. He was assisted by Col. G. L. Cooper of Pueblo.—C. N. Henry, Fieldman for Western Farm Life.

Shorthorns That Milk

ARE MONEY MAKERS.



A herd that will give you a good monthly cash income is what you will need in the future. One of our young bulls from a Record of Merit cow can develop your herd into a dual-purpose paying proposition.

We know the war is over and have bulls for sale at prices that you farmers and ranchmen can afford to buy. Write for our bargain list and easy payment plan.

We also have several young bulls for sale, priced to sell.

THE PINE VALLEY DAIRY & FARMS CO.
Seeley G. Rose, Mgr. Colorado Springs, Colo.

OUTSTANDING HOLSTEIN BULL

We have for sale a yearling son of a three-year-old heifer who made 1,035 lbs. butter last year and 21,428 lbs. milk, making her fifth in the world for butter production and ninth for milk for the year 1921-1922. The bull calf is sired by a 30-lb. son of Johan Duchess De Kol Lad, a bull who has two world record sisters, and two world record daughters. Calf is mostly white and a beautiful individual.

WRITE FOR PRICE.
WHICH IS REASONABLE.

Mrs. R. G. Douglas, Rush, Colo.

PRODUCTION — TYPE — SIZE — BREEDING

We offer you a wonderful amount of these Holstein qualities—and from a clean herd. Bull calves from fine record dams. Pahgre Valley Ranch, Loesch Bros., Montrose, Colo.

Buy a Calf Out of This Herd

Twenty cows in this herd on an official seven-day test averaged 446.13 lbs. of milk and 20.19 lbs. of butter.

COLORADO STATE HOME,
2305 S. Wash. St. Denver, Colo.

Public Sale

Registered Holsteins

Broomfield, Colo.

Wednesday, November 1, '22

Write for Catalogue.

40 Head of Females

Mostly all producing cows, 3 to 6 years old.

Sired by Johanna Ormsby Lad and bred to a son of the $106,000 Carnation bull.

ALL CATTLE TESTED.

J. J. KALBERER, Broomfield, Colo.

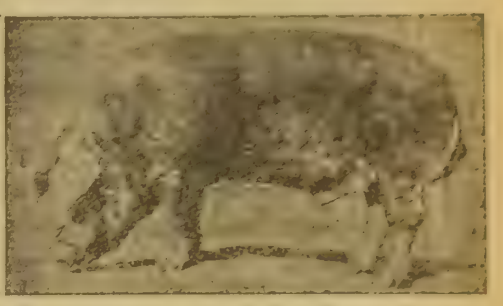
BUCHANAN & HENRY, Auctioneers.

BLUE RIBBON HERD

DUROCS

Buy them young and grow them yourself. Weaned pigs, regular price $25 to $50. Our specialty for short time on good farmers' boars, weaners, $15 and $20. Show prospects, weaners, $50. Are breeding now for fall farrow. Can sell you one or a carload. Our Blue Ribbon herd was the high winner at Denver. Write today.

The Blue Ribbon Live Stock Co.
C. F. Burke, Mgr. PUEBLO, COLO.



PRIZES

TAKEN BY THE

WYLDEMERE FARM Milking Shorthorn Herd

AT THE WESTERN STOCK SHOW, DENVER, 1922.

2nd Prize Royal Glenside.....Aged Bull. ....
1st Prize Calf Herd.....
1st Prize Get of Sire..... } The Get of
1st Prize Young Herd..... } Royal Glenside
1st Prize Produce of Dam....
1st Prize Yearling Bull.....
1st Junior Champion..... } The Get of
1st Reserve Grand Champion..
1st Prize Junior Bull Calf.... } Royal Glenside
1st Prize Senior Bull Calf....

1st Prize Senior Heifer Calf.
1st Junior Champion Female.
1st Grand Champion Female.
2nd Prize Two-Year-Old Heifer.
4th Prize Two-Year-Old Heifer.
4th Prize Senior Yearling Heifer.
2nd Prize Junior Yearling Heifer.
3rd Prize Junior Yearling Heifer.
4th Prize Junior Heifer Calf.

FOR DISPOSAL—Several heifer calves out of R. M. cows, with records over 10,000 lbs. Inspection invited. Avoid correspondence, as these calves must be seen to be appreciated.

J. B. BENEDICT, WYLDEMERE FARM
LITTLETON, COLORADO

Milking Shorthorn Grades Heifers and Young Cows

Reds and roans. Heavy in calf, and Springers. Especially selected from good herds. One or a carload, priced reasonably, quality considered.

C. H. HINMAN,
STOCKYARDS, DENVER, COLO.

Bates Shorthorns

are the foundation blood of true Milking Shorthorns. We have them. A few bulls for sale.

THE CARPENTER CATTLE CO.
GREELEY, COLORADO

Buy MILKING SHORTHORNS

from the oldest established herd in the state. We can supply your needs in bulls of beef type either horned or polled Shorthorns.

Write Superintendent for folder on breeding and prices.

State Industrial School,
Golden, Colo.

D. S. Polled Herefords

Cows from Polled Plato, herd headed by POLLED SUCCESS A 3rd. Young bulls and heifers for sale.

Smith Livestock Co.
CHIVINGTON, COLO.

Mather's Big-Type Polands

sold to breeders in four states this year are giving satisfaction.

CHOICE YOUNG BOARS
at prices that will surprise you.

C. J. Mather, Longmont, Colo.

SPRING BOARS

Just a few real herd headers left ready to go at pre-war prices. Used with grade sows even, they will more than pay for themselves on the first crop of pigs. Write today.

C. C. Boyd, Yuma, Colo.
Livestock Auctioneer and Duroc Breeder.

Brauer Purebred Duroc Co.

Colorado Springs, Colo.

The greatest individual lot of spring boars at moderate prices, to close out early. Now is your time to buy.

Write for full particulars, etc.

J. W. BRAUER, Gen. Mgr.
22 Lorraine St. Colorado Springs, Colo.

HAMPSHIRE HOGS

We make a specialty of furnishing [illegible] Show and Herd Boar prospects that combine the blood of the greatest show hogs ever produced. Lookouts. Wickwares and Tiptons. Free booklet etc., write N. E. MOSHER & SON, Hugo, Colo.

C. A. C. QUALITY STOCK.

In picking your Shorthorn breeding stock, remember

SNOW KING

breeding has proved itself in the show ring. Lord Douglas calves out of Snow King heifers are even better. We will have some bulls of this breeding for sale this summer.

COLORADO AGRICULTURAL COLLEGE,
Fort Collins, Colorado.

We have bred hundreds of prize-winning and high-producing Holstein cows, including

Tilly Alcartra

We can supply you with that same line of breeding. Write

McKAY BROS., Caddoa, Colo.

GREAT BARGAINS, 960 HEAD HEREFORDS, SHORTHORNS, ABERDEEN ANGUS

1, 2, 3, 4 and 5 years old. Cows, heifers and bulls. Prices $75 to $120 and up. 360 Percheron and Belgian horses, stallions, mares and colts, 1 to 6 years old. Prices $125 and up per head. One head or a carlot. Breeding guarantees with each. Registered pedigrees by mail. Stock on twenty farms in Iowa and Illinois. Write for circular and particulars. Address ILLINOIS HORSE & CATTLE CO., Good Block, Des Moines, Iowa.

BUCHANAN & HENRY,
LIVESTOCK
AUCTIONEERS

1927 Broadway Denver [illegible]
Write us, or Phone Cham[illegible]

To guard their digestions

and give them the foods they like, too.

More intelligent cooking—this is a subject in which most American mothers are vitally interested.

Isn't it true that you put more into your foods than mere ingredients? Do you not put motherly thought into the *selection* of the ingredients—to insure wholesome digestibility for your boys and girls?

That many children still need such care is shown by the published report of a benevolent society which says: "The 35 per cent of under-nourished children in Chicago were found equally in the homes of the poor, the well-to-do and even the wealthy. Great benefits would follow *more intelligent cooking.*"

While little Eskimo boys and girls may digest, in heavy form, the fat which is essential to all of us, intelligent American mothers recognize that civilized little stomachs are not so ostrich-like.

In the home where the mother has seriously considered—"What cooking fat is best for my children," you will generally find Crisco. For women seem instinctively to appreciate the healthfulness and *digestibility* of this *vegetable* shortening.

Yes, Crisco costs, during an average week's baking and frying, a few pennies more than do most cooking fats. But thoughtful mothers would no more deliberately choose cheap indigestible shortening than they would deliberately choose inferior milk.

And mothers often write, too, of the pleasurable pride they take in their delicious Crisco results. They find that Crisco cakes are light and tender and stay fresh longer; that Crisco pies have such flaky crusts; that Crisco browns fried foods so quickly that the fat cannot soak in.

Crisco is sold by grocers in small, medium sized and large cans. Made and sold in Canada, too.

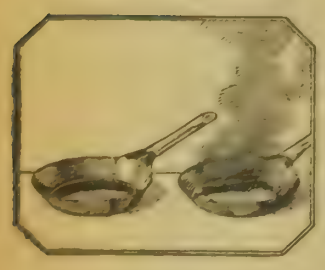
Gold Cake

5 tablespoonfuls Crisco
¾ cupful sugar
½ cupful milk
4 yolks of eggs
1½ cupfuls flour
½ teaspoonful salt
3 teaspoonfuls baking powder
½ teaspoonful lemon extract

Cream Crisco and sugar together. Beat egg yolks very light and add to creamed mixture. Add dry ingredients, milk, and lemon extract and mix well. Turn into a small Criscoed and floured cake tin and bake in moderate oven forty-five minutes.

Sufficient for one small cake.

To receive "A Calendar of Dinners" containing 615 recipes and 365 dinner menus, send 25c to The Procter & Gamble Co., Cincinnati, Ohio, Section U-10 Dept. of Home Economics.



Two Simple Home Tests!

Avoid Smoke and Odor!

Put into separate pans equal amounts of Crisco and any other shortening. Heat slowly for eight minutes, or until they reach a temperature where a bread crumb browns in 40 seconds.

Notice that the Crisco, unlike most cooking fats, does not smoke at this proper frying temperature.

You will find that frying with Crisco will be very helpful in keeping your whole house fresh and free from the odor of cooking fats.

Low Melting Point. Easy Digestibility.

Into half a glass of lukewarm water drop a small lump each of Crisco and any other fat. With a teaspoon gradually add hot water until Crisco melts. You will find that few other fats melt at this point. Food authorities say that an easily digested fat should melt near body heat—98½ degrees. Crisco, you will find, melts even below this temperature. It melts at 97 degrees. (This test does not necessarily condemn the digestibility of the other fat, but it will aid you to establish Crisco's fine digestibility.)

For delicious cakes which stay fresh longer
For flaky and digestible pastry
For wholesome digestible fried foods.

1922, by The Procter & Gamble Co., Cincinnati

Digestible Vegetable Shortening

Some Reasons Why Smith's Steers Outsell Brown's—Page 3

WESTERN Farm Life

Vol. XXIV. *Denver, Colorado, November 1, 1922.* *Semi-Monthly*

(POLITICAL ADVERTISEMENT.)

Democratic Victory

on November 7th

Will Bring Relief and Prosperity

to the Tax-burdened Farmers of the State of Colorado

William E. Sweet

Progressive Democratic Candidate for Governor

Times have been mighty hard for the Colorado farmer for the past two years!

He has suffered a heavy loss of perishable crops because of lack of transportation facilities. He has actually lost money on most of the crops he has marketed, because prices have been so low and freight rates so high that the difference between the two did not leave him enough to meet expenses and pay him for his labor.

But the prices of everything he has to buy are still much higher than they were before the war and in some cases prices are still as high as they were when the war ended.

According to the United States Department of Agriculture, the index figure of prices for all farm products on September 1, 1922, was 53.1 per cent LOWER than that for two years ago, and 31.9 per cent LOWER than the average for the past ten years on Sept. 1.

Yet the monthly report of the United States Department of Labor for June, 1922, showed that the average wholesale price of more than 100 commodities that all consumers must buy, including food, clothing and fuel, was 50 per cent HIGHER than on June 1, 1913.

Everything the farmer has to sell brings far less than the average for the past ten years, while everything he must buy costs more than the average. He has less money to buy with, but everything he buys costs him more.

Republican leaders in Colorado have attempted to make it appear that the farmer is prosperous, but the farmer knows better. The Republicans promised him relief, but for two years his condition has grown worse.

The Democratic platform offers constructive measures for increasing and stabilizing the prices of farm products. The Republican platform offers the farmer nothing except a suggestion that he spend a lot of money he hasn't got to build storage warehouses.

CO-OPERATIVE MARKETING.

The Democratic party is mindful of the deplorable economic position of the farmer. He is the prey of those who would depress the price of his products when ready for the market in order to profit from the rise in value resulting from the subsequent demand of the consumer. The farmer cannot prosper unless cost of production is taken as the basis of price. We, therefore, demand that a State Market Commission be created, modelled after that of California and corresponding to the Federal Bureau of Markets, with a State Market Director to act as adviser for producers and distributors and to assist them in getting their produce into a fair market.

The State should encourage the organization of co-operative marketing associations to protect the producer and his interests as consignor of his products. This will do much to stabilize the business of farming which is so necessary to general prosperity.

The expenses of the State Market Commission can be met with a revolving fund which will not be a charge against the general revenues of the state.

INVESTMENT OF PERMANENT SCHOOL FUND.

The permanent school fund of the State of Colorado is a sacred trust fund for the use and benefit of the children of Colorado. It must be administered in a manner which will guarantee security of principal and at the same time return as high a rate of interest as is consistent with safety. We believe that first mortgage loans on Colorado farms offer such security and favor the enactment of a law which shall require that at least 50% of the principal which is now invested in bonds and mortgages shall hereafter be invested in first mortgage loans on land situated exclusively within the State of Colorado.

Put an end to Republican Extravagance

During four years of Republican administration in Colorado all taxes have increased 61 per cent, and general state taxes have increased 75 per cent.

The present state administration has been extravagant. Nobody can deny that. It spent $200 for an inkwell and $1,200 for an office desk. It erected an office building at a cost at least 50 per cent greater than the taxpayers were led to believe the costs would be.

These examples are cited to show how recklessly the present Republican administration has spent the people's money. Such extravagance is largely responsible for the increase of 61 per cent in taxes.

The farmer has been forced to pay this enormous increase in taxes at a time when his products were constantly falling in price. His property could not escape taxation, though much of the property of wealthier men escaped.

The Democratic party in Colorado is pledged to economy in state government and to reforms in our system of taxation which will force everybody to pay his full share of taxes, thus relieving the farmer and the small home owner, who have been paying more than their share.

Two Years of Republican National Administration has Utterly Failed

to put farming on an equality as to earnings with other industries. It has aided the railroads and the manufacturing industries by direct legislative enactments, and has taken steps to vote a huge bonus from the national treasury for the benefit of the shipping industry. But the financial condition of the farmer has grown worse, in spite of the aid promised by the Republicans through the emergency tariff act and the new general tariff act.

Don't Let the Republican Smoke Screen Hide the Real Issues—

Vote the Democratic Ticket Straight

Vote for William E. Sweet for GOVERNOR

He will put the power of the State back of the Farmer in his demand for Credit

Western Farm Life

A Western Magazine for Western Farmers and Stockmen

VOL. XXIV. DENVER, COLORADO, NOVEMBER 1, 1922. No. 21.

Some Reasons Why Smith's Steers Outsell Brown's

AMOUNT AND QUALITY OF DRESSED MEAT FROM ANIMAL DETERMINES VALUE

By Gilbert Gusler.

DRESSING percentage, or proportion of carcass to live weight, is the most important factor in determining the value on foot of a steer to be slaughtered for beef.

Hindquarters from beef steers are now selling for more than twice as much a pound as the forequarters. The proportion of the more valuable parts in a steer carcass influence the live weight price to be paid.

Consumers must be pleased and they are willing to pay a much higher price for meat of high quality showing proper finish. Buyers recognize this in purchasing cattle for slaughter.

"WHY did my neighbor's cattle sell for 10 cents a pound, while mine, marketed at the same time and weighing about the same, brought only 7 cents a pound? What points do buyers consider in determining what prices they can pay for different bunches of steers?"

Such is the substance of an inquiry from a reader. As this answer is being written prime beef steers are selling as high as $12.90 a hundred pounds on the Chicago market, while common light steers are selling down to $5.50 and canner steers as low as $3.50. Evidently the differences in value are tremendous, or the slaughterers would not discriminate so much.

Packers Buy on Dressed Weight Basis.

If a steer buyer for one of the packing companies were asked to enumerate the primary reasons for the wide range in value, it is probable that he would say that the poor and the good steers showed three important differences.

1. In dressing percentage or percentage of carcass to live weight.

2. In the proportion of the weight of the carcass which is in the most valuable wholesale cuts.

3. In the character of the meat itself, consumers being willing to pay a much higher price for meat from the higher grades of steers.

The best steers reaching market will dress as high as 63 to 65 per cent of carcass to live weight, while common beef steers may dress as low as 48 per cent, with canner steers still lower. Thin old dairy cows sometimes produce only 37 per cent or even less of carcass. This means that the offal varies from about 36 per cent of the live weight in the best steers to 63 per cent in cast-off "shells" from the dairy.

The offal includes the hide and hair, the blood, the feet and legs up as far as the knees and hock joints, the heart, liver, kidneys, some loose internal fat and the digestive tract with its contents. The hide makes up about 7 to 8 per cent of the live weight or from one-fourth to one-third of the offal. The tallow varies from a negligible quantity to as much as 4 per cent of the live weight. Hides at present are worth from 19 to 22½ cents a pound, which is more than the average value of the carcass. Other parts of the offal are worked up into by-products, but so much of the weight is in the stomach, intestines and their contents that its average value per pound is much less than that of the carcass.

Buyer Must Consider Dressing Percentage.

It is easy to understand why the probable dressing percentage is a prominent factor in the mind of the buyer in deciding how much he can bid for a bunch of cattle. Many packing companies require their buyers to record their estimates of dressing per cents each time they make a purchase, and the buyers are furnished the actual record later on so that they become expert in making estimates. Rarely will they miss the actual percentage over one point on the average.

If a steer which sells for $12 a hundred pounds on the present market dresses out 63 per cent of carcass worth 18 cents a pound, then a steer dressing 58 per cent, assuming that other factors such as cost of slaughter, value of by-products and of the carcass per pound were the same, would be worth only $11.10, or 90 cents per hundred pounds less. For there would be five pounds less beef worth 18 cents a pound in each hundred pounds of weight on the hoof. Likewise a steer dressing only 48 per cent would be worth only $9.30. It happens, however, that the carcass from the steer dressing only 48 per cent would not be worth 18 cents a pound, so that the difference in value on the hoof would be much greater than the dressing per cent alone would make.

Parts of Carcass Vary in Value.

Everybody knows that all parts of the carcass do not bring the same price per pound. The housewife will pay much more for steak or roast than she will for stew cut from the same animal. Naturally a steer whose carcass is relatively heavy in the valuable parts should outsell one whose weight was more largely in the cheaper cuts.

In cutting up a side of beef into wholesale cuts, it is divided into fore and hind quarters generally between the last two ribs. The "round" is separated from the loin and flank by a cut about half way between the hips and tail head down to the hind flank a short distance in front of the stifle joint. Another cut from the rear of this flank to the middle of the last rib separates the "loin" above from the "flank" below. In dividing the forequarter, the "foreshank" is cut off at the shoulder joint and the "plate" below is separated from the "rib" and "chuck" above by a cut from near the middle of the last rib forward through the shoulder joint. The "rib" and "chuck" are separated from each other by a cut between the fifth and sixth ribs which lie just at the rear of the shoulder blade.

The prices per pound of these different parts of the carcass are shown in the first column of figures in the table accompanying this article. The loin, rib and round are much the most valuable. These include the upper half of the steer's body from the rear of the shoulders on back to and including the thigh. The cheaper cuts include the lower and forward part of the body. The third column of figures in the table shows the usual percentage of the carcass weight that is found in each wholesale cut and the fourth gives the percentage of the value of the entire carcass in each cut when prices are as given in the first column of figures.

Hindquarter Outsells Forequarter.

At the present time hinquarters are selling for more than twice as much per pound as forequarters. Loins, whence come porterhouse and sirloin steaks, are worth more than twice as much as the average value of the carcass as a whole. The loin and rib combined have 26 per cent of the weight of the carcass, but they contain, at these prices, 51 per cent of its value.

Records from the slaughter of large numbers of animals show that in some cases the loin makes up 19 per cent of the weight of the carcass, in others 15 per cent. The rib varies from 8 to 11 per cent, or the rib and loin together may vary from as low as 23 per cent up to 30 per cent

This bull heads the Colorado Agricultural College Hereford breeding herd. Sires of this type are necessary to produce market-topping steers.

After all is said, however, this second requirement made by the steer buyer, that as much weight as possible be in the high priced cuts, is the least important of the three. Variations in it are less pronounced and more difficult to perceive.

The table likewise makes clear the third of the primary requirements of the steer buyer, namely, that the meat must please the consumer. Prime native steer carcasses are worth 18 cents a pound, while plain cows bring only 7 cents a pound. Even this price range does not tell the whole story, for the carcasses of canners are unsuitable for selling over the butcher's block, but are worked into other forms, such as canned beef. The retailer will pay 38 cents for loins from the best steers, but he can only pay 15 cents for others and hope to sell them at a profit. The better grades of beef are more tender, palatable, juicy, nicely flavored, more nutritious as well as more attractive in appearance than the low grades.

Besides having a dressing percentage of around 63, the $12 steers on the present market would produce beef worth about 18 cents a pound. They probably would have a little more of their carcass weight in the valuable cuts. The $5.50 steers would be low dressers and their carcasses worth only about 10 cents a pound. Canner steers selling at $3.50 would dress out still more poorly and produce beef worth only 6 to 8 cents a pound.

What Determines Dressing Percentage.

Whether a steer will have a high dressing percentage or not depends on how fat he is, on the degree of paunchiness he shows, and the amount of weight in his hide, head and legs.

When a steer is fattened, the weight put on is added mostly to the carcass, while the parts going into the offal are changed but little. A 1,000-pound steer gaining 400 pounds in a five-months feeding period would increase his dressing percentage perhaps 10 to 12 per cent. A broad body, full and plump in every part, deeply covered with mellow flesh indicating a thick carcass and high finish goes with a high dressing per cent for the same reason. The cattle buyer, usually mounted in the larger yards, will handle the animal, pressing along the spine over the loin and along the ribs to see how deeply they are covered. Other signs that the animal is highly fattened and therefore will be a high dresser are found in the size of the tongue fat, or "wattle," between the lower jaws, the "roll" which the fat steer pushes up at his hind flank when he walks and the fat on the ends of the pin bones.

Paunchiness is due to an excessive quantity of feed and water in the digestive tract. It is the custom to "fill" cattle with hay and water when they reach market. If the cattle "fill" excessively, because of hot weather or some other cause, so that their sides project decidedly beyond straight lines from the shoulder to the hip, the buyers will expect them to be low dressers and will make low bids or will delay making any bid at all until the cattle have lost some of the fill. It can be shown that each 10 pounds of fill which a 1,000-pound steer takes reduces its value per hundredweight about 1 per cent, but since cattle are always assumed to be filled when they are offered for sale, the seller is the loser if they have not had the customary feed and water.

Although a heavy hide lowers the dressing percentage, it is not discriminated against on that account unless excessively dirty, because hides as a rule are worth more than the average value of the carcass. There is no similar compensation when the dressing percentage is lowered by a big, coarse head or coarse legs and joints.

What Constitutes Good Beef Type.

From what was said before with reference to the location of the high and low priced cuts, it follows that animals which have short legs, short necks, are broad over the crops and along the back, loin and rump, thick and bulging (Turn to Page 10)

Utah Sets High Mark in State Fair Attendance

COUNTY DISPLAYS OUTSTANDING FEATURES OF THIS YEAR'S EXPOSITION

THE Utah State Fair this year was put on without a paid manager, State Treasurer W. D. Sutton, at the request of the State Fair Board, as a measure of economy, undertaking temporary management. At his request, Governor Mabey appointed other state officials to share with Manager Sutton responsibilities, as follows: The State Auditor's office to be in charge of gate receipts; Secretary of State, automobiles; Department of Agriculture, Boys' and Girls' camp, and so on down the line. The governor, in a foreword in the premium list, said: "The Fair is an undertaking, the success of which depends entirely upon the services of public-spirited people. Its primary purpose—that of teaching the value of exhibiting and comparing commodities—is deserving of the whole-hearted support and co-operation of every loyal citizen. In behalf of this worthy function, I therefore choose this medium of bespeaking the good will and assistance of every Utahn in the interest of making the State Fair bigger and better every year."

Special Crop Days.

This year for the first time, the Utah State Fair made a special feature each day of some one commercial crop.

Monday, October 2, was Onion Day. On a specially prepared dais in a prominent place in the Horticultural and Agricultural building on this day was a special display of the crop for that particular day.

One man alone—E. E. Smith of Bountiful, Davis County, had sixteen crates—45 onions to the crate—and four bushels of Utah fancy large Spanish onions, representing a special grade granted for this Davis county commercial onion district by the United States Bureau of Markets.

Competent persons in the onion business for years say this display of market onions was the finest ever put up in Utah. While there were many more exhibitors from commercial onion districts of the state, E. E. Smith of Davis county captured sweepstakes, winning the $25 cash prize and trophy ribbon. Best bushel was won by L. J. Phister of Woods Cross.

Tuesday, October 3, was Cantaloupe Day. It was too late in the season for this commodity and there were but few entries of but mediocre quality.

Wednesday was Fall Head Lettuce Day. Like the cantaloupes, most of the head lettuce had gone to market, yet some most creditable displays were in evidence.

Thursday was Utah Celery Day. A wonderful showing of celery was displayed. James Hewitt of Ogden won first place with his most attractive display of very high quality celery. It was crisp, succulent and of good size and color.

Friday was Potato Day. A bushel basket of high quality market stock potatoes exhibited by grower constituted the entries. Some entries showed unusually large size, but uniform in cleanness, size and quality. The particular entry that pleased the judge was the one shown by a Davis county farmer, consisting of medium size, smooth and good quality Early Ohio potatoes. The judge stated the market does not want a potato unduly large or potatoes of irregular size. It pays the better price for a well graded, uniform sized potato, averaging 12 to 14 ounces in weight, one that the housewife can boil or bake in about thirty to forty minutes or work up for the table in her pressure cooker in eight to ten minutes.

Saturday, the last day of the Fair, was given over in special crop display to silo crops and pure seed display. The writer was not able to get returns on this work. From what he saw at the fair he knows a most worthy display was given. These special displays were made possible by the enterprising work of county agents in commercial truck crop centers and the liberal donations of W. W. Armstrong and other public-spirited business men of Salt Lake City who contributed money for special prize [illegible]. The effect and influence of this [illegible] should make these special crop [illegible] a permanent and valuable feature [illegible] annual sessions of the Utah State [illegible]

Walter H. Olin.

We noted a lessened number of large out-of-the-state exhibitors in both the horse, beef and dairy cattle exhibits. The high cost of making the complete fair circuit and lessened returns breeders are receiving for pure-bred foundation breeding stock, caused many breeders to restrict the number of fairs usually in their circuit. In the classes named, therefore, the competition was largely between Utah breeders. While the entries were necessarily fewer, yet the quality of exhibits shown by the Utah breeders was never better. Their young animals, shown for the first time, revealed some careful breeding and selection.

In the draft horses, senior and grand champion Percheron stallion honors were won by Fox Farm, Murray, Utah. Junior champion stallion and grand champion mare honors were awarded to J. M. Ritchie, Charleston, Utah. First and championship honors in Belgian classes went to James H. Clinger of Provo. Shire honors went to Leo Seely, Mt. Pleasant, Utah.

Good Dairy Cattle Exhibits.

In the Guernsey cattle, Miss Minnie Miller, owner of Thousand Springs Farm, Wendell, Idaho, won grand championship honors in both bull and cow classes of this breed. Her string of Gnernseys has won honors all over the Northwest. Cows under official test show butterfat tests ranging from 5 to 6 per cent, and a milking flow from 50 to 60 pounds or more a day.

Among the Jerseys there was much closer competition. The Smith Jersey Farm of Salt Lake was able to win senior and grand championship on bulls, and senior and grand championship on females. They also had the junior champion bull. The junior champion female was shown by Frank Y. Rouse of Springville, Utah.

One remarkable Jersey exhibit was Eagle's Irene, claimed to be the oldest cow in Utah and believed to be the oldest in the United States. She is a pure-bred Jersey, born March 6, 1899, owned by the State Mental Hospital at Provo, Utah. She was in charge of Frank B. Astroth, field agent for American Jersey Cattle Club of New York, who stated this remarkable cow was bred and raised by her present owner, is the mother of nineteen females, two males, and is expected to give birth to another calf within six weeks. She is still in good condition, although more than twenty-three years old. In her lifetime, Mr. Astroth says Eagle's Irene has produced 170,100 pounds of milk, yielding 9,450 pounds of butterfat.

Holsteins Predominate in Utah.

Utah as a whole has more "Black and White" dairy cows than of any other type. The competition was most keen. Utah Agricultural College pulled first and second honors on two fine cows four years old and over, but the grand champion cow was shown by Clifford S. Potter of Ogden. The grand championship honor on bull went to E. D. Buchanan of Venice, down in Sevier Valley of South Utah. Highest honors for breeder's young herd went to Nelson Brothers Company of Woods Cross. Thus Holstein honors were well distributed.

Strong Show of Beef Cattle.

In the Shorthorns, the Warnock herd of Loveland, Colo., divided championship honors with the John Seely & Sons' herd of Mt. Pleasant. Warnock's had the senior and grand champion bull, junior yearling heifer and senior heifer calf, while John Seely and Sons won senior and grand championship female, and first on two bulls shown by one exhibitor, and four animals get of one sire. The junior champion bull was shown by C. Hauf & Son, Glendo, Wyo. C. Hauf & Son came in second on calf herd, yearling herd and graded herd, Warnock Shorthorns winning first in all these classes.

Charleston, the Herefordshire of Utah, cleaned up on Hereford awards. Winterton Brothers took the junior, senior and grand championship on females, and had the junior and grand championship bull, with first in yearling herd, calf herd and four animals any age. The senior bull championship went to J. M. Ritchie, also of Charleston.

Record Hog Show.

The new swine pavilion was well filled with what the management considered the largest and best quality exhibits ever assembled. There were nearly 300 entries.

There were seventy entries in the Berkshire classification. The writer remembers when a dozen to fifteen comprised all the Berkshires that were shown. Glen's Rival, Jr., a junior yearling boar, bred and owned by Ashlane Farm, Pleasant Grove, Utah, was made the grand champion. He is now the undefeated Berkshire boar of the Northwest, having won previously at both Portland and Spokane last year—the two largest shows of the Northwest. Ashlane's Laurel Princess, from the same farm, was the grand champion female.

Nearly one hundred entries were made in the Duroc Jersey classification. Idaho cleaned up on all championship ribbons. The Richards Livestock Company had the junior, senior and grand champion boars and the senior and grand champion sow. The Thousand Springs Farm showed the junior champion sow. Sensation blood is the foundation of both herds. These two show herds came direct to Utah State Fair from Montana, where they captured all champion honors. Queen Mammoth Sensation, grand champion sow, was grand champion at Idaho State Fair and Western Royal Livestock Show at Spokane last year.

Big Show of Spotted Polands.

There was a separate classification for Spotted Poland Chinas. Nearly fifty Spotted Polands were shown this year, while there were but twenty-five of the blacks. Pulley & Sons of American Fork showed the junior, senior and grand champion boar in Spotted classes, and won first in aged herd, breeder's herd and young herd, while Liberty Farm, Grace, Idaho, had the senior and grand champion sow with Pulley & Sons coming in with junior champion sow. Edward Erickson of Venice, Utah, took all awards for which entries were made in black Poland classes.

There were nearly thirty Chester White entries. The champion boar was pronounced by Judge Fjiested of Idaho to be one of the best Chester Whites in the whole Northwest. He is owned by Lew Mar Price of Provo, Utah.

The showing of sheep was light, owing to the fact that the big National Ram Sale is held in (Turn to Page 11)

Lusk Potato Growers Build Warehouse

COMMUNITY ORGANIZES AND STORAGE CELLAR IS 100 PER CENT CO-OPERATIVE ENTERPRISE.

A TEN-CAR capacity potato storage warehouse has just been built as a community enterprise at Lusk, Wyoming. Everybody helped to build it. The local organization commonly known as "The Lions of Lusk" started the ball rolling. These roaring enthusiasts set forth with a subscription list and in a few days raised more than $1,000 in cash and enough work pledged to enable the committee to build the huge cellar. Most of the farmer subscriptions were in labor, while the cash was raised in town. Cash, labor and materials furnished were credited to individuals, giving stock in the enterprise at $1 a share.

Building Company Organized.

A committee of farmers and city business men was elected by the members at large to take charge of the building operations. After due consideration, the "Lusk Cellar Company" was organized and the work of financing and building the cellar was given over entirely to them with the understanding that its duties should cease when the cellar was completed. At the time of completion the cellar came under the operation and management of the County Certified Potato Growers' Association, which in turn contracts to charge five cents a hundred pounds on all potatoes handled through the cellar. This sum shall apply, first, to pay interest on the capital stock, and second to retire the stock. Thus all stock gradually becomes the permanent property of the association. The County Potato Growers' association has agreed to place a competent man in full charge of all cellar operations. He is to receive and grade all potatoes coming to the cellar and handle the marketing of the crop on as low a commission basis as is found possible.

Potatoes a Relatively New Crop.

In Niobrara county, as in most newly settled farm sections, the chief crop has been grain. Potatoes have been raised on most farms to some extent, but no organized force has been put to work until recently to demonstrate practical methods of producing and marketing the crop. In 1920, however, a car load of certified Minnesota grown Irish Cobbler and Triumphs were distributed to eighty-seven farmers. These men all signed up for certified seed growing and as the crops turned out so bountifully the first year, most of them were induced to meet and organize a county association now known as the Niobrara County Certified Potato Growers' Association. One of the first requirements set forth by this association was the growing of a seed plot. The quality and productivity of the crop has been improved from year to year in accordance with the skill used by individuals in selecting seed in order to comply with the seed plot requirements.

Since the initial seed was shipped to the county no grower has been allowed to plant any except this stock, therefore uniformity of type has been practically maintained throughout the county. The Cobblers have done exceptionally well, out-yielding all other varieties and coming on as early as the Early Ohios. The quality of this variety, as grown under local unirrigated farm conditions, is exceptionally good, and when taken to the big potato producing sections for seed has returned, in most cases, a bountiful crop of the very finest quality tubers. The association has advertised extensively and has kept a close check on all outgoing seed, therefore the performance of the seed under varied conditions is fairly well known.

The past two years crops of certified seed have been sold to good advantage. The first year the entire crop brought $2.75 a hundred f. o. b. local shipping points. Last year the crop moved at $3 a hundred. This year, however, the price will be much lower on account of existing market conditions.

Certified Potato Clubs Organized.

Boys and girls who are enrolled in the county certified potato clubs are to be given much credit for a splendid record of progress and for the fine manner in which they have so often induced mothers and fathers to accept up-to-date methods of potato culture. The county requirements in this club project are exceptionally strict. At least one acre must be grown from certified seed. All members in each club must grow the same variety and follow out like practices of growing and marketing the crop.

When operations recently started on the Lusk cellar the live young woman's potato club, which is composed of nine members, along with their progressive leader, William Bonsel, held a meeting and decided that the club would do its share of work on the cellar. Therefore on a Saturday they met at Lusk with teams, shovels and scrapers and put in a full day at hard work. Mothers did their part by encouraging the young folks to do their best, and thereby added the last link in helping make the Lusk cellar a 100 per cent co-operative enterprise.

Market Outlook for Farm and Ranch Products

BETTER FARM PRICES DUE IF BUSINESS MAINTAINS PRESENT BLOOM

Edited by Glenn G. Hays.

FRESH evidence of expanding business and trade is disclosed every week. The Federal Reserve bank reported increases in loans and note circulation and the money market was a little firmer last week. Further increase in employment occurred and scarcity of labor became more marked. Although the steel industry, considered the best barometer of business, is expanding operations, unfilled orders are increasing and are more than 50 per cent larger than last February. Building permits in September were the largest for that month on record and the total for the first nine months of 1922 is 51 per cent larger than in the same period in 1921. Business failures are decreasing. Freight car loadings for the week ending September 22 were within 3 per cent of the highest on record. Wholesalers and retailers are doing at least a fair volume of business.

The healthy state of the country generally in spite of the manifest disadvantage under which farmers are laboring is indicated by a record output of 1,873,000 automobiles and trucks in the first nine months of the year, September again setting a new record for that month. Subscriptions to the recent Government loans are believed to be treble the amount offered. In the first six months of 1922 investors in this country bought bonds of foreign governments or corporations in the amount of $641,448,000.

The commodity price level is rising, the combined commodity index number being about 18 per cent higher than in May, 1921. Prices of farm products are still lagging, but most of them are higher than a year ago and the majority advanced during September.

Forces tending to bring about higher prices include the abundance of credit, only one-third of the potential supply being used; the tariff law; the tendency to higher labor costs in the case of manufactured goods, and the fact that wholesale and retail stocks are not large. The disastrous results from the previous period of inflation and the inability of Europeans to buy are the retarding influences.

That the country generally can flourish with farmers laboring under their present handicap is beyond belief. Either higher prices for farm products are coming or general business will lose its present bloom.

Too Many "Inbetween" Cattle.

With an abundance of grassers, both natives and rangers, a big run of shortfeds and warmed-up steers from feeders anxious to clinch a small profit, the cattle market has had too many steers of the intermediate sort upon which prices declined $1 to $1.50 at Chicago from the high point late in September. In the last ten days, however, total receipts at seven markets shrank 12 to 15 per cent for the first time in a month and a recovery of 15 to 50 cents on intermediate and lower grades occurred. Car shortage was a factor in the decreased supply.

Western rangers were most numerous of the season at Chicago, but Kansas City showed some falling off in the run and it is believed that most of the Southwestern cattle have been marketed. Since grass cattle must be marketed in the next five or six weeks while many of the shortfeds could be carried beyond that period to a higher finish, it seems advisable to give the former the right of way.

Prime steers became still more scarce last week, reaching $13.50 at Chicago, although sales above $12 are few, the bulk of beef steers going to killers between $9 and $10.50. Cows and heifers responded along with steers to the lighter supply. Bulls also were a shade higher and the calf market made some recovery.

Feeder purchases in the twelve leading markets in the week ending October 6 were the largest of the season and 20 per cent larger than in any previous week this year or in the two preceding years, adding more evidence that this year's total will be the largest in years if the present pace is maintained a few weeks longer. The movement from all markets in August and September combined set a new record for those months. Some fleshy feeders are going out, but most buyers show partiality to light steers on the stocker order.

Hogs Trending Lower.

Receipts of hogs declined slightly last week, but were equal to the highest on record for that week in previous years. New crop hogs, many of them underfinished, were numerous so that weight qualifies for a premium and the price spread has narrowed sharply. Eastern markets are but little higher than Chicago, so that shipping demand is negligible.

Fresh pork prices were weak early, but hardened toward the close and demand in general is broad. Foreign purchases are increasing as stocks abroad are said to be light. Britain is able to pay for all she needs and Central Europe, in spite of depreciated exchange, is taking a fair quota.

Hog prices are apt to work lower until receipts are more nearly up to winter volume.

Lamb Run Lightens.

Receipts of lambs declined last week in seasonal fashion, although the run was already far below normal for this season of year. Dressed lamb prices sagged further, but toward the close a return of strength was evident. Feeder lambs lost $1.50 from the recent high point and are now at a slight discount below fat westerns, but have started upward again. The total feeder movement from the twelve leading markets in the week ending October 7 was 170,401 head, the largest in several years, but the total for the season to date is light and it is too late to expect a big pilgrimage to feedlots from this time on. September shipments from all stock yards were the lightest as far back as the record goes.

Big Horses Good Property.

Sound horses with weight have advanced $20 to $30 per head recently. Loggers, miners and coal dealers finally entered the market and their competition has lifted values. Horses scaling around 1,800 pounds are bringing $275 at Chicago, loggers taking plainer sorts, especially if hairy-legged, as high as $225, and rugged workers scaling 1,500 to 1,650 pounds are clearing at $175 to $215. Wagon horses are in demand again at $125 to $200. Southern demand as yet shows few signs of life.

Wool Prices Rising.

Seaboard markets report wool prices strong and advancing. Mills are picking up all low-priced offerings and dealers are indulging in speculative operations. Advances have not been pronounced, but more are expected, especially on fine wools. The holdings of 1,200,000 bales of crossbred wools in the hands of the British-Australian Wool Realization Association tends to keep the market on such wools in leash, although foreign auctions are reported 5 to 10 per cent higher than a month ago.

Bullish Revisions in Wheat Statistics.

Revisions in world wheat and rye production figures, which now give them a bullish aspect, together with maintenance of a keen demand for wheat in position for quick shipment to mills or to the seaboard, resulted in a substantial advance in prices last week.

With the total supply of wheat outside of Russia and Mexico actually less than last year, when more was consumed than was produced, the existence of a large surplus in North America becomes less serious, especially since the movement from the latter to date has been absorbed without difficulty.

Besides the decline of 250,000,000 bushels in European wheat production compared with last year, the rye crop is about 100,000,000 bushels less, so that a big increase in European wheat and rye needs is evident. These have been augmented by wet weather during harvest, which lowered the quality and necessitated the use of a high percentage of dry foreign wheat in milling. Substitutes, high extraction in milling and war bread are already being used in some European countries and will be relied upon still further if possible, but the shortage is too great to be made up by such means.

Reports from Russia are not rosy, but most of the home needs will be provided for, so that the 24,000,000 bushels imported last year may not be necessary, affording a partial offset to the increased needs of the rest of Europe. Non-European importing countries may take 25,000,000 to 50,000,000 bushels less than last year, but these deductions still leave a large increase in total import requirements to be provided for.

The crop year is now far enough along to set stakes on the rate of disappearance of imported wheat. Thus far it has been slightly faster than to the same date last year, although shipments from the United States alone have been much less.

Under the conditions, the financial ability of the importing countries to buy as much wheat as they need seems to be the limiting factor in the long-time trend of prices.

The car shortage is becoming more acute and receipts at primary markets have declined in spite of the advance in prices. Canadian wheat is coming forward rapidly, more rapidly, in fact, than the surplus can be gotten out of the country, so that it is backing upto some extent. The facilities at Montreal are working at capacity (Turn to Page 15)

Colorado Canning Club to Chicago

KIT CARSON COUNTY GIRLS WIN CONTEST AND WILL COMPETE FOR TRIP TO EUROPE.

Maude Sheridan, State Club Leader.

TWO Colorado girls, Miss Elaine Hendricks and Miss Bertha Boger of Kit Carson county, won the interstate girls' club canning contest at the State Fair and will compete at the International Stock Show in Chicago with winners from other districts in the United States for the grand prize, consisting of a three months' tour of Europe with all expenses paid. The states entitled to compete in this district contest at Pueblo were Arizona, New Mexico, Utah, Wyoming, Texas, Oklahoma and Colorado. Teams from Denver, Larimer, Saguache and Kit Carson counties of Colorado took part in the contest. All the girls entered in these teams have acted as local leaders for the younger girls of their respective communities. They have all been in the canning club work for at least four years, which was one of the requirements of those eligible, and the Kit Carson girls are in their seventh year of club work, four of these seven years having been devoted to the canning club work. Last year they constituted the champion team in the state contest on a millinery demonstration.

Alice Gardner and Mildred Sutley represented Saguache county in the contest. These girls have canned great quantities of vegetables, fruits and meats for their neighbors. For two years they have conducted the regular business of canning. Each of these girls has been in the canning club work for the four years required and they have taken many prizes on their exhibits in state and county contests. In addition to doing much home canning they have done some canning for their neighbors. Laura Garrett was leader of the successful canning club of Larimer county. Alice Gardner, of the Saguache county team, led the canning club at Center, and Mildred Sutley had charge of the bread club last year that did so much in working out methods of making good bread from soft wheat flour.

Denver county was represented in this contest by Jana V. Hubble and Blanche Viland, members of the Boulevard Canning Club. These girls canned 600 jars of fruits and vegetables the past season. They were keen contestants for the honor of representing this district in the Chicago contest, winning third place.

In the contest at Pueblo the teams each gave three demonstrations, one in canning meat, one vegetables and one fruit. The meat canning demonstration was given in a manner showing unusual skill on the part of all the contestant teams. Each team during the hour of its demonstration canned a hind-quarter of pork having the entire quarter in jars at the end of the period. Part of it was canned as roast pork, part as boiled and a portion as fried pork chops. They also made sausage and fried and canned it.

The girls of the Kit Carson team won the confidence of their audience from the beginning. As a result of the experience they have had in canning and demonstrating, they spoke with authority and the volume of work which they have done gave them wonderful skill with their hands. They were among the first persons in their home county to learn to can. As a demonstration team they used their ability in the most ideal manner.

The county club agent of Kit Carson county, Miss Amelia Alexander, had her car fitted with a box on the running board so it could be opened in some back yard garden and products of the garden canned. The girls of the team went to many homes each summer during their four years of canning club work and each Saturday afternoon they demonstrated in a store room in town. The women from the farms came in to rest and while they rested watched the girls at their canning work.

Due to the excellent work of these two club girls of Kit Carson county and to many other club girls, practically every home in the county now has home-canned products. One year the girls of the county devised recipes for canning rabbit. There were twenty-six recipes worked out and demonstrated and the girls compiled these in the form of a leaflet. These leaflets were sent to every home in the county, and many a rabbit was converted into a nice jar of sausage or mince meat or chili.

Bertha Boger and Elaine Hendricks are the true, high type of American girlhood and the best wishes of club members throughout the state goes to them that they may be successful in the contest at Chicago, and that they may go to France as representatives of American club girls.

Elaine Hendricks and Bertha Boger, Kit Carson county winning team in interstate canning club contest.

Shall We Grow Barberry Bushes or Wheat?

DESTROYING GUILTY HOST PLANT WILL WIPE OUT BLACK STEM RUST

AFTER five years of active warfare against the common barberry bush the United States Department of Agriculture apparently has demonstrated the efficacy of the eradication program as a means of preventing black stem rust.

Montana has just furnished the proof that tends to bear out the contention of scientists that the common barberry bush was the principal source of the rust which destroyed $200,000,000 worth of grain in six states of the spring wheat area in the period 1919-1921.

When Montana's cereal crops were planted this spring there were no known barberries in the state, according to W. N. Christopher, state leader of the Federal barberry eradication forces. Places where bushes had been dug were watched for sprouts, which were grubbed out as soon as they appeared. Accordingly the rust spores had no means of getting a start this season and as a result the grain was harvested without a dollar's worth of rust damage being in evidence.

In describing the situation in an informal report to the Conference for the Prevention of Grain Rust, a national organization representing the agricultural interests, Mr. Christopher insists that the state's freedom from rust is due directly to the absence of barberry bushes. The weather, he says, was unusually favorable to the development and spread of spores.

These spores are nothing more or less than the seeds of the rust plant, which is a vegetable growth. These seeds, like any other seeds, must have the proper soil in which to grow. This "soil," agricultural scientists have found, is the leaf of the common barberry bush. Spores have been "planted" artificially on other shrubs, weeds, grains and grasses and have failed to "sprout." Therefore the removal of the barberries is regarded as a certain method of putting a stop to the ravages of black stem rust.

Montana evidently has proved the theory of plant disease experts. In 1921 government figures show that Treasure State farmers lost 750,000 bushels of wheat. In 1920 the damage included 1,397,000 bushels of barley.

Montana's achievement is the second great demonstration of the connection between the common barberry and stem rust. The first was furnished by Denmark. After suffering huge losses the Danes, acting on the advice of their agricultural scientists, passed a law in 1903, making the owner of property on which barberries grew responsible for the rust losses of neighboring grain growers. As a result the barberry bushes promptly came out. Today, according to Dr. E. C. Stakman of the University of Minnesota, who is in Europe studying rust conditions, the losses in Denmark have disappeared.

The United States started a campaign against the barberry in 1918, when war measures were taken to increase the production of wheat. Since that time more than six million bushes have been dug up in thirteen north central states from Lake Huron to the Rocky Mountains.

The Conference for the Prevention of Grain Rust is an organization representing the interests af these thirteen northern wheat growing states, formed for eliminating the destructive black stem rust of wheat, barley, oats and rye through the eradication of the common barberry bush. The black stem rust takes an annual toll of almost 50,000,000 bushels of grain, while in epidemic years the losses have been as high as 200,000,000 bushels.

The membership clause of the plan of organization adopted by the conference at its first meeting at the University Farm, St. Paul, March 11, 1922, is as follows:

"Each interested state will be represented by four members, as follows: The governor, the commissioner of agriculture, a representative of the state experiment station and the president of the state farm bureau federation or corresponding farmers' organization. In addition, the executive committee is authorized to provide memberships at large for national farmers' organizations and other interests affected."

In addition to the individuals representing the thirteen states involved, many public officials and citizens are actively co-operating with the conference. Close co-operation between the conference and the United States Department of Agriculture has been established.

The executive committee is as follows: J. A. O. Preus, governor of Minnesota, St. Paul, president; Franklin M. Crosby, Minneapolis, vice president; Harrison Fuller, Minneapolis, secretary-treasurer; C. W. Hunt, president Iowa Farm Bureau Federation, Des Moines, Ia,; Joseph A. Kitchen, Commissioner of Agriculture and Labor of North Dakota, Bismarck, N. D.; C. P. Norgord, Commissioner of Agriculture of Wisconsin, Madison, Wis.; J. F. Reed, president Minnesota Farm Bureau Federation, St. Paul.

Colorado is represented by Governor Oliver L. Shoup, Denver; J. D. Pancake, president Colorado Farm Bureau Federation, Loveland; L. M. Taylor, secretary State Board of Agriculture, Fort Collins; A. K. Peitersen, botanist, Colorado Agricultural College and Experiment Station, Fort Collins.

Survey work has been done in Colorado covering fifty-eight counties, and nearly 25,000 barberry plants have been destroyed as a result.

Old Three Thorns, Bad Wolf of the Wheatfields

OLD Three Thorns, a descendant of Saw Tooth, had gradually driven his anchoring roots into the top of a windswept hill, where, from behind a screen of brush and scrub trees, he commanded a view of thousands of acres of rolling wheat land. He had been a long time in establishing himself in this delightful and seemingly secure location and in those years he had grown from a mere pair of leaves on the end of a toothpick to a shrub that cast a shadow like a tree.

For generations this veteran and the lesser ones of his kind had been the enemies of those fields that each summer changed from green to gold and then to gray, and they had been sending out a pestilence far and wide to weaken the stems of the wheat plants and reduce or destroy the crop of grain. But the farmers who owned these rich lands finally learned the methods of the enemy that preyed on their wheat, and with the assistance of the Government and state they soon began the destruction of the hosts that reared the tiny wind-borne spores. As a result of destroying the bushes, losses were reduced, but in one part of the county, in an area 4 by 1½ miles in extent, the wheat fields continued to suffer as if the very air above them were poisonous. Last year 250 acres were completely ruined, causing a loss estimated at $7,000. On another 500 acres the grain was a partial loss and was of such quality it was docked 29 cents a bushel. Altogether, the farmers in the little neighborhood lost about $10,000.

The farmers and men employed by the Government to protect the wheat crop did not believe in the poison air theory. They were sure one of the original enemies had escaped, and with that idea in mind they went over this part of the county as if with a rake.

And down in the southwestern part of the infected region, where the prevailing summer winds carried the spores to the northeast, they found the daddy of all the barberry bushes they had killed off, old Three Thorns, the wolf of the wheatfields. He was an uncommonly old and vigorous specimen of the common barberry. Botanists estimated his age to be nearly 60 years, and the damage he has done to the wheatfields in three score years is almost unbelievable.

Ranchers who have finally hunted down a stock-killing animal hardly feel more relief than these farmers freed of the old enemy of their grain fields.

Some Easy Money Can Be Pinched in Steel Traps

TRAPPING FUR-BEARING ANIMALS PROFITABLE USE OF SPARE TIME

Dick Wood.

SOME of the easiest money that ever came my way was pinched in a steel trap. Of course, I had to work hard some time or other, as all trappers do, but after a few unproductive days are spent in looking up fur signs and placing traps down where they will do the most good, a run of good luck has a tendency to make one forget about the preliminary work. Waiting for results is the similarity in setting traps and planting farm crops, and success in either line depends greatly on the care taken in the first process.

The reason some trappers are unsuccessful is because they do not give the animals credit for their capacity to learn. Whether by intelligence or power of reasoning or merely instinct, it is a fact most fur bearers know pretty well how to keep the hides on their backs. If they were both gregarious and senseless, all the species would have long since went the way of the passenger pigeon and the buffalo. Take the otter, coyote and wolf for examples: Sly animals, these, and look how well they hold their numbers. Perhaps the former is as numerous today as they were a hundred years ago. The latter specimens have the law against them, yet they will be roaming the plains a hundred years from now.

Fur bearers will den and range in close proximity to civilization. Often their haunts are on a ranch that is covered daily by herders or farmers. The animals become accustomed to the regular routes of the men and their work. When they are not hunted, the wild animals seem unusually bold, and mingle [illegible] with human trails. Let the [illegible] go out with guns or traps and the [illegible] animals disappear, seemingly. [illegible]ional trappers will readily admit [illegible] animals quickly acquire the knowledge to protect themselves. Even the muskrat, common and easy to trap, may be accustomed to your daily trips along a creek bank, and live on in nearby haunts. But just step down in the shallow water marsh or feeding grounds and see what happens. The 'rats observe you are off your beat, and it becomes a contest to catch one.

Must Study Animal Habits.

If you want to cash in heavy this winter on furs, begin right and the battle will be half won. If you have been accustomed to traveling along a path on top of a creek bank, the chances are the muskrats and other water animals are accustomed to your trail, and keep their distance from it. In looking for trap locations, the thing to do is to make a note of them from the patch, then set the traps without leaving undue human signs. Better yet in locating water sets, use a boat. Trappers use boats almost exclusively for trapping the sly otter, as no human scent is left on or near the set if the bank isn't touched.

In looking up signs of land animals, it is advisable to ride a horse. Wild animals are accustomed to horses and will not become frightened at their tracks. I know some wolf trappers who set their traps from horseback, and they are very successful.

If it is necessary for the trapper to walk and get out into country frequented only by fur bearers, then he should wear boots, preferably rubber, and leave as few human signs as possible, especially around traps. Unusual things frighten wild animals. A sly fox will walk across a railroad track or along a woods wagon road and think nothing of it, but the same fox would shy of an iron smell back in the woods. In other words, the environment must not be disturbed if you would catch the sly and cunning animals.

Water "Sets" Often Necessary.

Briefly, there are two sorts of "sets", those made in water, and land sets; the former for such animals as the muskrat, mink, raccoon, otter and beaver; the latter for fox, skunk, coyote, weasel, etc. Whenever practicable traps for sly, keen-nosed animals should be set in the water, for the reason there will be no odor of trap or human hands to alarm the animal. Even the fox may be taken in a water set if the location is suitable, and an attractive bait is used.

Some animals, especially the raccoon and mink, feed in the water and traps set in places where tracks indicate they enter the water are profitable sets. Tracks may often be seen under water where tne animals regularly walk, and if the trail follows a narrow shelf of bank, it should be guarded by a blind set trap. A few sticks or stones may be used to narrow a trail for a set, either on land or in shallow water.

Water-loving animals will climb onto logs, large stones and swim around obstructions along steep banks rather than take to land, and such places should be examined for tracks and claw marks. Holes in the banks and in hollow logs are likely places for sets, and drift piles along banks should never be passed by. Mink and raccoon explore all these places.

Many successful trappers depend almost entirely on bait sets, particularly in water trapping. When it is advisable to bait sets, fresh fish should be used. To catch extremely sly old mink, the writer has known trappers to go to the trouble to build small pools and put a few trout in them for bait. This is a winner set.

Locate Frequented Trails.

Land sets present much more of a problem to the novice. Here animals may be traveling in a hundred directions, or wandering aimlessly, and keen-nosed animals can more readily smell the traps. Where trails are found in use by valuable fur bearers, the trapper will have to devise a set that will not catch worthless rabbits, birds, house cats, dogs or other domesticated animals. Most woods trails are used by a variety of wild life and even humans. Rabbits are the greatest nuisance to the land trapper.

Just after a rain or light snow is the time to prospect for fur signs on land. Then the tracks will tell you what animals are using certain trails. You may also trail up animals to their dens, feeding grounds or a narrow place in the trail suitable for a trap set. Especially after a snow should the trapper get out in the fields and woods to trailing, carrying a few traps in a knapsack to set where he trails a fur bearer to its den. It is advisable to trap animals at their dens rather than employ some method of getting them that will destroy the burrow. Den places are used year after year by different fur bearers.

It is often more profitable to the trapper, especially in skunk trapping, to set traps in trails leading to a den, rather than in the mouth of the burrow, or hollow snag. Two or more raccoons not uncommonly den in one hollow tree and as many as fourteen skunks have been found to be denning in one burrow. A trap set at the en- (Turn to Page 20)

The First American

By ALBERT PAYSON TERHUNE

A NOVEL
In Eleven Chapters.

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CHAPTER VIII.

"Out of the Frying-Pan."

The prison governor, an elderly iron-faced man in a wig and dressing gown, received me in his bare office. He looked me over curiously, as if inspecting some strange specimen; wrote a line or two in a ledger, then nodded to a couple of guards.

They "fell in," one on each side of me, and walked me out toward a set of huge iron gates.

Somewhere in the silent city a clock was striking the hour of two. I had heard of men being executed at sunrise. But never at 2 o'clock in the morning.

Moreover, I had not yet had even the mockery of a trial. And I knew that no magistrate "sat" at such an hour. Therefore, I wondered much as I accompanied my guards through the clanging doors and out into the night.

We had moved forward until we came to a big four-horse coach, with armorial bearings emblazoned on the panels. By the light of the guard's lantern I saw, at a glance, that the "arms" were the same as those on the shoulder of the military cloak I had borrowed and lost.

Now, the sight of the coach, with its open door, gave me hope. Little as I knew of European customs, I was quite certain that, except in the case of some high noble, a criminal would never be driven to the scaffold in a crested coach-and four. Nor would such a vehicle be likely to be employed to carry an unknown foreigner before a magistrate, or to another prison.

At a motion from one of my guards, I stepped into the coach and sank back upon the soft, springy cushions. Never in my provincial career had I been in so luxurious a vehicle, nor had I dreamed there could be such a refinement of comfort and rich elegance about a mere carriage.

My two guards entered, seated themselves opposite me and slammed shut the door. The coachman cracked his whip. The postilions shouted! The four horses leaped forward, their iron hoofs sending up a gold-red shower of sparks from the cobblestones. With a lurch the great coach rolled ahead through the night.

I did not know Paris, nor, had I been familiar with its geography, could I have guessed, in that pitch darkness, in what direction we were bound.

Curiosity arose with hope. I turned to my guards.

"We are going to a magistrate?" I asked.

The question, for some reason, amused them vastly. They gave a gruff roar of laughter, but vouchsafed no reply.

"At least," I said, annoyed as a man ever is by a joke whose import he cannot catch, "we are leaving the Bastile. Any change, therefore, is for the better."

"Is it so?" chuckled one of the guards. "Enjoy the belief while you can."

"What do you mean?" I queried.

"I mean. young man," he returned in cryptic utterance, "that we have an old maxim which says: 'Out of the frying-pan into the fire.' You may, perchance, an hour hence, look back at the Bastile as a most pleasant frying-pan."

"You are a cheerful soul," I observed. "It is real joy to ride with one who so keeps up my spirits. Have you no more suggestions of this sort to brighten our little drive?"

"No," he reflected, in no way seeing my sarcasm, "I fear I have not. But I am glad if I have cheered you. 'Tis likely to be the last cheer you will know. And I do not grudge you the memory. I am even glad to brighten a luckless man's way when I can do it at no cost to myself. And if——"

"The orders," his fellow reminded him, "were Silence."

With a grunt the Job's comforter settled back in his corner, and we rolled on over the noisy cobblestones of the villainously ill-paved street with no further words.

Of a sudden we came to a halt. The horses were rearing, the postilions chattering like magpies. Through the front window I could dimly see several men spring out of the darkness and grasp the bridles. Then two more ran to the doors, pistols in hand, shouting:

"Stand and deliver!"

One carried a muffled lantern. My guards, instead of jumping forward to defend the vehicle, rolled back on the cushions and fairly screamed with merriment.

The man with the lantern chanced to flash its rays on the blazened panels of the coach.

With a yell of terror he dropped the light, bawled something to his companions, and made off at a wild run. In one second all the footpads had scuttled out of sight. The coach moved on.

Again I was in a daze of bewilderment. I should have known better than to ask my guards any further questions. But curiosity overcame sense.

"What does it all mean?" I demanded. "They were highwaymen. I know that. "But why did they flee like——"

"There was once a man," observed the garrulous soldier, "who went hunting with a pop-gun for a hare. Instead, he found a lion. I am told he left the scene of the hunt in the same fashion as our footpad friends."

"Is there no way of keeping you quiet?" growled his comrade. "Do you want thirty days in the guard-house for disobeying orders?"

"You won't tell on a messmate," retorted the garrulous one. "And our young passenger here will have enough troubles of his own without reporting me. I am safe enough."

Nevertheless, he lapsed into silence. Again we moved on through the night, my curiosity unallayed, a hundred questions dying unasked on my lips.

At length we drew up before wide gates that flew open at our postilions' summons. We drove into a flagged courtyard which, despite the late hour, was ablaze with torches. At a porte-cochere the coach halted.

My guards threw open the door, bundled me out, and led me up a broad flight of shining marble steps.

Thence I was taken indoors, along a gorgeous tessellated hall, down a second short flight of stairs, and — into the very guardroom where I had been seized and bound two hours earlier, and whence I had escaped with the guard-captain's cloak.

I blinked in dumb astonishment. A dozen men-at-arms still loitered about the place. The captain was once more at his table desk, glancing over some report.

At the far end of the room I saw the opening of the corridor along which I had run to the postern-door. And, from the barred kennel beyond, I could hear the discomfited bloodhounds whining and sniffing in their sleep.

For an instant the mad plan flashed across my mind to make a dash for the corridor, and so to the postern, to safety. But every man-at-arms in the place was on his feet and staring at me. There was no chance.

The captain glanced up from his papers. Our eyes met. His jaw dropped as if he had seen a ghost. He sprang up and came toward me. I thought I was in for a second attack. And, unarmed as I was, I braced myself to meet et.

But he paused half way and stood staring, his mouth opening and shutting foolishly. At length he made shift to gurgle:

"You? The vánishing man again! It is you whom this report deals with!" pointing at the paper he had been examining. "Man, how did you do it?"

"Do what?"

I asked it crossly, for I was tired of mysteries.

"How did you get out?" he sputtered. "We bound and double-bound you, and laid you, trussed up, on yon bench. Then I went up to report, and the men swear they did not take their eyes from you one moment while I was gone. Yet, when I came back——"

"I and my sword were gone, and your cloak as well," I finished, as he paused in sheer wonderment. "For the borrowing of the cloak I ask your grace. And here are two louis in payment thereof. But I left my own in exchange. Surely——"

"Your own!" he cried. "That you did.

(Turn to Page 17.)

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Do Your Duty at the Polls.

In a democratic form of government the views of a majority of the people rule in matters of public policy. The only way to get at these views is to hold elections in which platforms and policies are outlined in advance and full opportunity given for voters to inform themselves as to the issues at stake. In order that the results may indicate the true feeling it is necessary for all to vote one way or another. If some one element or class fail to get out a full vote the results will not express the views of the majority of all the people correctly. What we are getting at is the duty and obligation incumbent upon every citizen of the state to express himself at the polls November 7. Politicians are wont to estimate the possibility of this or that class of voters remaining away from the polls in considerable numbers in predicting the probable outcome of a closely contested election.

Farmers are sometimes charged with indifference in the matter of voting. If the weather election day is unpleasant, we immediately hear it predicted that the farmer vote may be small as a result. Voting is a sacred duty of citizenship and farmers of Colorado have had ample opportunity to inform themselves on the issues at stake. Their votes are of the utmost importance in deciding who shall fill our public offices and what policies shall prevail in the administration of our governmental affairs. If farmers in any considerable numbers neglect to go to the polls the result of the election will not be a true indication of what the majority of the citizens of the state want. With election day only a week ahead we would urge our readers to let nothing interfere with their registering their preferences at the polls. Agriculture is the one big industry of Colorado and farmers' votes are needed to decide aright the political problems before us at this time.

Bovine Tuberculosis in the United States.

A most interesting and significant map has been prepared by Dr. J. A. Kiernan of the United States Department of Agriculture, who is chairman of the international committee on tuberculosis. It shows the prevalence of this disease in all parts of the United States. It indicates clearly where dairy farmers have been indifferent to the testing of their cattle for tuberculosis. The information upon which the map is based is the result of a study of the testing of three million cattle in all parts of the country.

A study of the map shows that in 46 per cent of the total area of the United States, the disease exists to the extent of less than 1 per cent. This relatively free area is mostly in the mountain states of the West and in the Southern states. In some sections of the United States, chiefly in New York and part of the New England states, the herds contain 26 per cent of tuberculous animals. In Colorado but one county is credited with having more than 3 per cent of tuberculosis. Some fifteen or sixteen counties have more than 1 per cent, but less than 3.

Even though the herds of Colorado are comparatively free from tuberculosis, dairymen particularly should recognize its seriousness and begin at once a definite campaign to eliminate it entirely. On another page of this issue there is an article treating of the campaign of eradication being conducted in the state. The Accredited Herd plan appears to be the most practical method as yet suggested. The rapid progress made in testing cattle for tuberculosis has been largely due to the development of the intradermic method, which can be more quickly and conveniently given than the thermal, the test used so largely in the past. The opthalmic or eye test is also a valuable check test. All three of these tests are now being used in the Accredited Herd work. Many more breeders in Colorado should be making application for the Federal inspection. It is but the part of good business to begin the work of controlling and eradicating this disease before it has spread to the extent it has in many of the older dairy sections.

The Home Meat Supply.

Have you made your plans for your home meat supply? It would seem that too many farmers are following the practice of selling their hogs and buying back their meat as they use it. This is not only an inconvenient practice, but greatly adds to the cost of the meat used on the family table. It has been estimated that farmers of Colorado lose several million dollars each year by failing to cure and store their own meat.

If the meat from five hogs on an average is consumed by each family in the state it would call for the slaughtering of at least a million hogs each year. The Colorado Year Book gives figures showing that only 67,302 hogs were actually slaughtered in the state last year. Where did the rest of the meat consumed in the state come from? In all probability much of it was shipped in from other states, and quite likely made from hogs grown and fattened in the corn belt states to the East, while our own hogs were shipped out of the state.

This growing and curing of the home meat supply is one of the economies which can easily be put into operation. If you do not know how to kill and cure your own meat, write to the Animal Husbandry Department of the Colorado Agricultural College. H. H. Smith, one of the men in this department, is a specialist in handling meat and his services in the matter of supplying detailed information on this subject are free to any citizen of the state.

Watch Out for Hog Cholera.

This is the season of the year for outbreaks of hog cholera to occur. If you are feeding hogs not immunized against cholera, watch closely for the first symptoms of the disease. If the herd is treated immediately it is usually possible to get by with but few losses. Prompt action, however, is necessary.

If a hog dies of an unknown cause, watch the whole herd closely for at least a week. If any other animals in the herd show signs of sickness call a veterinarian at once. If a hog develops a temperature ranging from 105 degrees Fahrenheit to 108 and staggers as it walks, it is a good indication of cholera. Early action in using anti-hog cholera serum is the only means of saving the well animals. This serum is a preventative and not a cure, so that it must be administered before the hog already has the disease in order to be effective.

The only absolute safe way to handle hogs is to keep them immunized. Breeders of purebred hogs are coming more and more to the adoption of this practice in their breeding herds. Some hog men, however, prefer to let market hogs go without immunizing, relying on the serum as a preventative in case cholera appears in the herd or anywhere in the immediate neighborhood. If the disease is allowed to spread through the herd before the serum is used, heavy losses may be expected. Constant watchfullness on the part of the owner or feeder is necessary to avoid serious loss.

Getting It All.

It is often the little leaks that pull down the profits in farming as in any other business. Perhaps you had a field of wheat or barley which was lodged or injured by hail so a considerable portion of the crop was on the ground. This grain is lost unless it can be gleaned by hogs or poultry. This cannot always be done, for fields are not fenced hog tight. It might pay enough, however, to put in the fence. A case in point is that of a farmer who had five acres of wheat stubble which he fenced with woven wire, buying most of the material and hauling it fourteen miles to his ranch. The gains which he put on his hogs running on this stubble, at current prices, paid for the material and labor of building the fence, including hauling. Later the wheat which had been worked into the soil by the hogs rooting, sprouted and made rich pasture for a bunch of sheep.

First Colorado State Seed Show.

Developing adapted and acclimated varieties of crops for various sections of Colorado means much to our agricultural production. Considerable progress has been made in developing and registering good seed in many counties of the state. The State Seed Show to be held in Colorado Springs, November 14 to 18, will serve to give the pure seed idea a big boost. On another page of this issue appears an article giving the general plans for this first pure seed show which it is to be hoped will become a permanent institution. It will aid in bringing about a better distribution of desirable acclimated seed types. Buyers and sellers of good seed grain or potatoes can get together at such a show and make desirable exchanges. This seed show should become a clearing-house for the distribution of good types of the various farm seeds.

Dr. Sandsten of the Colorado Agricultural College, who is in charge of the potato improvement work for the state, is making considerable progress and has some good ideas in mind for seed potato growers. We would urge that everyone interested in better seed get behind this show and help make it a permanent success. Write to the manager, State Seed Show, Colorado Springs, for a premium list. Substantial prizes are being offered for exhibits of corn, wheat, oats, barley, rye, forage grasses and seed potatoes.

Optimism in Agricultural Outlook.

Prosperity has not returned as speedily as some have prophesied and all had hoped, but there are many things which should lead us to take an optimistic view of the situation. In a recent circular letter Roud McCann, director of the Extension Service of the Colorado Agricultural College, suggests that this is a good time for us to take stock of our agricultural resources—not our personal resources—but those of the industry in general. All recognize that things are not running as smoothly as they might, and while the war has been over four years, conditions are still badly out of adjustment. Mr. McCann thinks that while this is true, the outlook for agriculture is by no means discouraging. The position of the American farmer is most favorable compared with the farmers of the European countries. Our agriculture is still a going concern. We have goods to sell, products with which we can do business. The farmers of some of the other nations are producing very little and their people are going hungry. Some have products to sell, but there is no money with which to buy.

Here in Colorado, points out Mr. McCann, we are promised a yield of 21,000,000 bushels of corn, a state record, a fruit crop which as a whole is declared to be the best in the state's history. Our production of beans shows a large increase, the present indications being that the total yield for the state will be nearly 700,000 bushels, as compared with 342,000 bushels last year. The bean crop of the United States, figuring the production of seven of the larger producing states, will be less by 4,000,000 bushels than a year ago. While the sugar-beet crop is not up to normal, in northern Colorado it has just been announced that $10,000,000 in cash will be paid to the beet growers of this district between now and the first of the year.

These things are cited to show that the farmer is doing his share towards getting the world back into good running order, although at present his production may not be showing much of a profit, due to the industrial unrest and difficulties in other lines of business. Farmers have not made many mistakes in getting back to business, but in considering the agricultural situation as a whole there is probably need for more careful planning, a little less of the speculative type of farming with its jumping from one crop to another as indications seem to point to a possible profit. Why not work out a more definite long-time program, based on the use of livestock, with such crops as will feed the stock grown and produce such surplus staples for sale as are best suited to the soil, locality and marketing facilities. At this time particularly careful study and thought should be a part of our work. The program of Farmers' Week, at Fort Collins, December 11 to 14, will furnish an opportunity for the busy farmer and his wife to get in touch with leading farm men and women of the state and the nation. This will be of material assistance in working out better plans for the year ahead.

The wheat crop of France for 1922 is estimated at 235,380,000 bushels, according to a cablegram received by the United States Department of Agriculture from the International Institute of Agriculture at Rome. This is a decrease of 88,090,000 bushels from the yield in 1921.

From the Nation's Capital

FARM ORGANIZATIONS WORKING FOR LOWER TAXES AND BETTER FINANCING FOR FARMERS.

E. E. Reynolds.

QUIET reigns on Capitol Hill. Many senators and congressmen are away among the home folks mending their political fences, which in some instances are sadly in need of repair. Meanwhile the big farm organizations maintaining headquarters in Washington are busily engaged on a program of action when Congress meets at the call of the President, November 20.

The National Board of Farm Organizations, including the National Farmers' Union and fifteen other farm organizations, at its recent semi-annual convention in Washington, went on record in opposition to branch banking. The Federal warehousing system was endorsed. The Department of Agriculture was asked to extend its leased wire market system to all sections of the country and it was recommended that Congress be asked to appropriate the necessary funds for such extension.

The commodity plan of co-operative marketing as carried on in California was endorsed. Commodity financing through an organization similar to the War Finance Corporation was advocated.

It was recommended that the Federal Reserve banks be authorized to buy Farm Loan bonds, providing the interest is not over 4 per cent, and that these bonds be eligible as a basis for security for additional bank note circulation; that Congress change the maximum limit for farm loans made by the farm loan banks from $10,000 to $25,000, and that the appraisal value of farm buildings for farm loans be raised from 20 per cent to 50 per cent, providing that in no case shall loans on buildings exceed the value of the land.

The National Board of Farm Organizations went on record as opposed to the ship subsidy bill, and resolved that the Senate be requested to pass the Voigt anti-filled milk bill as it was passed by the House.

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National Grange Will Demand Lower Federal Taxes and Greater Economy in Government.—The National Grange will decide upon its legislative program at the coming fifty-sixth annual session which will open in Wichita, Kan., November 15.

Dr. T. C. Atkeson, the Washington representative, is preparing a list of recommendations which he will present for consideration by the national body. While no statement is made, it is ascertained that the most important recommendation will be one demanding a reduction in cost of government operation and for lower Federal taxes. It will be shown that any kind of ship subsidy will add to government expeditures, therefore it will be opposed. For the same reason it is not likely that the Grange will favor any system of rural credits which necessitates the taking of money out of the Federal Treasury.

Increasing taxes and decreasing prices of farm products are regarded by Dr. Atkeson as the outstanding factors in the economic condition of agriculture. The Washington office of the National Grange has a made a compilation of the increase in the costs of Federal and state governments since 1915. In that period Federal taxes have increased from $380,000,000 to $3,197,000,000, or over 800 per cent, in spite of a decrease since 1921 of nearly $1,300,000,000.

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Enormous Increases in State Tax Budgets.—In the same period the tax budgets of the various states have increased from a total of $490,000,000 to $965,000,000, or nearly double. Some states have far exceeded this. For instance, California has increased from $16,000,000 to $40,000,000; Ohio from $18,000,000 to $56,000,000; Pennsylvania from $33,000,000 to $116,000,000, and Washington from $10,000,000 to $58,000,000. This does not take into account local, school, town and city taxes.

While taxes have been going up, the prices of farm products have been declining more rapidly than at any other time in the history of American agriculture. Dr. Atkeson suggests that the time has come when this situation should be understood. Either taxes and the cost of materials and supplies must come down or the value of agricultural products must go up, or else the decline in production and the trend of population away from agriculture is going to be greatly accentuated.

It is indicated that the National Grange will center its fight against government extravagance and in favor of tax reduction all along the line.

The demand upon the Federal government for appropriations is enormous. The Budget Bureau is compelled to cut the government expenditures for the next fiscal year more than $700,000,000, or about $2,000,000 a day under present expenditures, as the tax-gathering machinery is now running to the maximum limit. But every department, bureau, division and unit is asking for an increase in appropriations over the present year.

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Department of Agriculture Entitled to Small Increase in Appropriation.—The Federal Department of Agriculture, however, is undoubtedly justified in asking for a small increase. The estimates provide for an appropriation of $38,761,522, an increase of $1,132,399 over the present fiscal year. Much of this increase is made necessary by congressional action in enlarging the regulatory work of the department.

Of the $38,000,000 which the estimates would provide for agriculture, some $9,000,000 would be used in research, $3,000,000 in each of service and extension, and $17,000,000 or more in regulatory work, which is largely for the protection of the consumers in cities and towns.

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Farm Bureau Urging Increase in Loan Limit of Land Bank.—The American Farm Bureau and the other big farm organizations are united in asking for the acceptance of the Henry Ford Muscle Shoals proposal.

The Federation also is working for an increase in the loan limit to members of the farm loan associations from $10.000 to $25,000. It is also pointed out that there are localities in which co-operative farm loan associations have not been formed, where it is impossible for farmers to obtain the benefits of the Federal Land Bank loans. A bill will be presented to Congress in the near future, which will provide for the appointment by district Federal Land Banks of agents in communities who will represent the banks and make loans for it.

The farmer who would borrow from the bank through the local representative would be required to take stock in the association the same as is now required of all borrowers, but the agent would represent the bank and comply with all the requirements of the present law. It is figured that the activities of the agent should result in the establishment of a local farm loan association as soon as ten farmers have borrowed through the agent.

This bill would provide for the liquidation of Federal Land and Joint Stock Land banks, since there is no provision in the present act for these banks to discontinue or to consolidate.

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Farmers Paying High Rates of Interest.—The recent farm bureau referendum indicates that farmers in some parts of the country were paying as high as 10 per cent interest, and commission up to 10 per cent. Much of this money loaned to farmers was obtained by banks by rediscounting their notes in the Federal Reserve system, where they paid only a fraction of the rate of interest they charged the farmers. Bills are now before the finance committees in Congress, which provide that no draft, note or bill shall be admitted to discount unless it is accompanied by a certificate of the member bank showing both the rate of discount and rate of commission charged by the bank.

Who Whipsaws the Farmer?

Practically every farmer who is doing business in America today is up against a situation which is taking a large part of his legitimate profits.

Whatever you raise—hogs, wheat corn, eggs, beef, dairy products, garden stuff—you're fighting against disorganized market conditions, erratic public taste, manipulation, and the lack of the effective coöperation which might whip the business of farming into line for real profit.

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Some Reasons Why Smith's Steers Outsell Brown's.

(Continued from Page 3.)

in the thighs, and are full and low in the twist and which lack prominence at the shoulders, hips and tailhead would have a high percentage of weight in the high-priced parts.

The consumer wants meat that is tender, palatable, attractive in appearance, juicy and nutritious. The carcass of the animal that is fat, thick muscled and not coarse in bones or muscle fiber will produce meat of this sort.

The most important factor in making the carcass satisfactory to the consumer is the finish or degree of fatness, the signs of which have already been described. The steer should not be so fat that it is "gobby" and uneven, but smoothly covered, otherwise the carcass is unattractive and the cuts are wasteful. With a proper finish there is a smooth layer of outside fat over the carcass which preserves it in the process of ripening and improves the appearance. Also there is sufficient fat deposited between the muscle fibers to give the meat a "marbled" appearance when it is cut across the grain.

Steers possessing general quality indicated by the refinement of the bone, head, skin and hair and by the smoothness and springiness of the flesh when handled will have quality in the meat from its carcass.

To sum up the argument, the buyer can feel confident that steers of correct beef form, of fine quality and highly fattened will have high dressing percentages, will be well developed in the choice cuts and that the consumer will pay a high price for the meat cut from the carcass.

Small Carcasses Most Popular.

There are other things which affect cattle values to a limited extent. One of these is weight. Large carcasses furnish retail cuts too large for the family trade, although hotels and restaurants use them and to some extent favor them. Small carcasses are highly desirable if well finished. Whether yearlings or heavy cattle will bring the high dollar depends on their respective numbers in relation to the demand for cash.

Horned loads may be discounted 10 to 35 cents a hundred pounds under horn-less ones, because the buyer fears scratched, bruised carcasses, and damaged hides. Horned cattle are more restless in shipment so that their carcasses are darker in color. Horned loads, also, do not have such keen competition from feeder buyers as they do if dehorned.

Brands reduce the value of the hide from 1 to 5 cents a pound or from 60 cents to $4 for the entire hide, depending upon their number, location and size.

Shipping Conditions Affect Carcass.

Besides the things the buyer can see, he likes to know where the cattle came from and how and by whom they were fed. Cattle shipped long distances are apt to have more bruises, but they have been shrunk out so that they have high dressing percentages. Exercise before slaughter tends to make the carcass retain blood and kill out dark. This fault crops out in range cattle which travel much for their feed and "mill" about a good deal under confinement when shipped to market.

Some producers have developed a reputation for good cattle that kill out well and buyers may pay a premium because they feel confident of the results. Corn feeding produces the most attractive carcasses as the fat is whiter, the lean a brighter red and more marbled. Grass produces watery flesh although there is great difference in the grass from different sections. Beet pulp produces watery flesh, but "pulpers" are high dressers and sell well. Wheat is reputed to produce a fiery red color in the lean meat.

In one or more of these factors will be found the reason for differences in prices which cattle sell for. Together they are responsible for some steers selling for $12.90, while others are bringing only $3.50 on the same day at the same market.

Prices of High and Low Grade Beef and Relative Importance of the Wholesale Cuts.

	Chicago Wholesale High grade.	Low	Prices. Grade.	Per cent Carcass Weight In the Cut.	Per cent Carcass Value In the Cut.
Sides of beef	18 cents	7	cents	100 per cent	100 per cent
Hindquarters	23 cents	....		48 per cent	66 per cent
Forequarters	11 cents	....		52 per cent	34 per cent
Loins	38 cents	15	cents	17 per cent	37 per cent
Ribs	28 cents	7	cents	9 per cent	14 per cent
Rounds	15 cents	9	cents	23 per cent	20 per cent
Flanks	13 cents	....		4 per cent	3 per cent
Chucks	11 cents	6	cents	26 per cent	17 per cent
Plates	8 cents	....		13 per cent	6 per cent
Foreshanks	4½ cents	....		4 per cent	1 per cent
Tallow	7½ cents	....		4 per cent	2 per cent

Principles of Radio-Telephony.

Radiophone broadcasting and receiving has reached a stage where practically every one is interested to a more or less extent, and to those who wish to know more about the operation, this series of articles is directed.

In the first place, most scientists agree upon the idea that all space is filled with what is known as ether, which is considered as being perfectly elastic, and that the impulses, known as radio waves, travel in all directions through it. For instance, consider a pond of perfectly still water. As soon as its surface is disturbed, ripples or waves are formed which travel out from the center of the disturbance. Of course, any floating particle or weed at the edge of the pool is set in motion by the waves striking it. A radio transmitting station can then be likened to the disturbing element in the pond, such as a stone dropped in it, causing large waves to travel as before in all directions. The receiving set corresponds to the floating particles or weeds which are set in motion by the waves, the radio waves or electro-magnetic waves as they are called, causing a response in the receiving set just as the water waves caused the reed to sway as the wave strikes it. Of course, it is rather hard to imagine waves of such power as to spread out over thousands of square miles and capable of penetrating through brick walls and other intervening objects (provided they are not metallic) and still be of such a nature that they cannot be discovered unless special sensitive apparatus is provided for their detection. As stated before, this wave theory is accepted by most scientists because it seems to be the only one which satisfactorily explains the phenomenon which takes place.

This theory of wave propagation also explains the travel of light and heat as well as radio waves, and practically the same mathematical treatment can be applied to all, showing that they must bear some relation to each other. In fact, starting with heat and going up through light, X-rays and radio waves, a very striking similarity is observed which has led to the belief that the only difference between them is in their wave length; heat may have a wave length of only a fraction of a millimeter, while radio waves may reach a length as long as 25,000 meters.—Robert H. Owen.

Colorado University Radio Station.

The University of Colorado is rebuilding its radio station and expects to be in operation with a powerful broadcasting set in three or four weeks. The expected range of the set will be about 700 miles. No schedule has been decided upon, but news items for the high schools throughout the state will be sent out, as well as U. S. Department of Agriculture bulletins. A wave length of 360 meters will be used.

The University has had a station for some time and has the enviable record of having been heard south of the Equator, but its operation has been confined to experimental work and this year will be the first time a definite broadcasting program has been tried. Incidentally, it will be the first school in this state to start this service. The call letters assigned are KFAJ, for broadcasting, and 9XAQ for amateur work.

Good Yield on Summer Fallow.

Eighteen bushels of wheat to the acre on a sixty-acre field in the Grover district of Weld county was produced this year by R. G. Heagy, despite the abnormally light rainfall of the season. This land was carefully summer fallowed last year, being kept absolutely free from weeds. Mr. Heagy's good crop is an exception this year in that section.

Forty-five hundred acres of Kansas farm land has been freed from prairie dogs during the last year at a cost of less than 15 cents an acre. The United States Biological Survey, the agricultural college, and several county farm bureaus were responsible.

Utah Sets High Mark in State Fair Attendance.

(Continued from Page 4.)

Salt Lake City just five weeks previous to the State Fair.

Collective Farm and Fruit Displays.

For many years it has been the custom of the leading fruit, vegetable and grain counties of Utah to compete for a handsome silver trophy prize valued at $150. Two years ago Box Elder county came into permanent possession of this cup, winning it for the third time. Another trophy was put up and Salt Lake county won it in 1921. This year the contest was keen and strong to see who would win this high honor. No expense is spared in putting on these most artistic shows.

Salt Lake county in its exhibit this year had the finest apples the writer has ever seen put in a booth display. The Jonathans were sized to three inches and each one a rosy red. The Winter Bananas were the largest and most delicately colored the writer has ever seen shown anywhere. The onions, celery, cauliflower, cabbage and other vegetables were carefully grown and very closely selected for special exhibit purposes. The arrangement was most artistic and symmetrical. Mr. Ed Bowling, an experienced producer of fruits, grains and vegetables, as well as a natural born artist, outdid his own proud record in the design, construction and decoration of the Salt Lake pyramidal display. The Fleur-de-Lis in oats, especially grown for that purpose, and the flax used for drapes, had a most pleasing effect, while the roots, grains, grasses and fruits were most prominently displayed as the commercial crops of the county.

Competing with this splendid showing was the Utah county exhibit, prepared by Prof. E. H. Eastmond, in charge of the Art Department, Brigham Young University of Provo, and his competent staff of workers. He conceived a monument as a tribute to "Irrigation, the Blessing of the Wilderness." On one side was shown a section profile of a part of the Strawberry Valley Project, Utah county. Salem Cove, between Spanish Fork and Payson, was portrayed. In the center was the village of Salem and back of it Mount Loffer and Mount Nebo. In front of these was shown the High Line Ditch and the cultivated fields and orchards made possible by this Government project. In the very forefront was the Salem Commercial Canal with water from it flowing to the fields. The whole was in appropriate colors, lit up with electric light. On the opposite side was a panorama of the county just west of Utah Lake, portraying the new projects of Utah Lake Irrigation Company and the Provo Reservoir Company. In the forefront was Utah Lake, the model, worked out in relief, showing how water was being pumped onto the higher land for irrigation purposes. This was a facsimile of the topography of the country. Above this was inscribed "Irrigation Insures Prosperity." The canopy over this was studded with the fruits, grasses, grains, seeds, etc., while the roof over all was artistically set off with fruits and grains from orchard and field. Vegetables and melons, pumpkins, potatoes, corn, sugar beets, etc., adorned the bases and foot of the pillars and the monument in an attractive yet substantial manner.

Weber county had her attractive exhibit arranged on the good ship "City of Ogden," which was freighted down with the choicest offerings of the orchards, fields and truck gardens of this productive county. This ship rested on a sea of fruit, the waves being imitated by a clever blending of green, blue and white prunes. Around the framed booth were decorations of fruits, grains and grasses.

Davis county's exhibit consisted of a square booth set off with the agricultural and commercial products grown for market in this highly productive county.

The judges had some difficulty to determine sweepstakes, but finally awarded this honor to Utah county, with Salt Lake a close second, and third honors to Davis. Box Elder county had a most attractive display booth, but did not enter the contest.

In the second class district displays Millard county captured first place. Her booth carried a large cube glass container loaded with alfalfa seed, her great cash crop. This season her alfalfa seed crop is estimated to be nearly eight million pounds. This one county supplies more than 60 per cent of all the alfalfa seed raised in all Utah.

In the third class districts Morgan county won first place and San Juan second honors in group exhibits. When one realizes that San Juan county had an exclusive non-irrigated exhibit and that these people haul their exhibit better than 350 miles, they deserve great credit for their good showing of fruits, grains, vegetables and grasses. It was a good farmer in this county who two years ago won a $1,000 cash prize from the Farm Journal for best yield of high quality white oats grown under rainbelt conditions. Some of the best Turkey Red wheat grown in all the Rocky Mountain region is produced in San Juan county.

Farm Bureau Dairy Exhibit.

The Salt Lake county farm bureau carried out a very unique dairy exhibit idea in a neat, commodious booth screened and sanitary in every respect.

In connection with the exhibit the ladies of the farm bureau served a dairy lunch of milk, buttermilk, malted milk, cheese sandwiches, cheddar, Swiss and pimento cheese, cottage cheese and ice cream. This lunch was certainly an appetizing feature and appreciated by thousands daily.

State School Exhibits.

The University of Utah had a most commendable educational exhibit portraying the intellectual, social and student activity life of that well balanced school. The State Agricultural College had a most instructive exhibit showing the practical work being done there to direct farm, livestock and home operations in all parts of the state and the training given the State's young men and women on the campus.

The whole exhibit of the Extension Service centered around the slogan: "The business of the Utah Experiment Station is to discover new truths in order to assist the farmers of the State in the solving of their problems."

The mineral exhibits showed the growth of mining in Utah, with specimens of commercial ore and coal being mined. A balopticon showed scenes taken at various mining camps with much statistical information about the mining industry of the state.

The Woman's Building had perhaps the largest display of woman's artcraft and needle-work that has ever been shown. The domestic art exhibits, to fully know all of its merits, would consume one entire day.

Prizes to Manufacturers.

The large building devoted to the manufacturers' exhibits was completely filled with most interesting and instructive displays showing the manufacturing industries of the state.

For most artistic display Ostler Candy Company won first prize. For most original and unique booth the Salt Lake Pressed Brick Company won first. For the most effective advertising booth the Cullen Manufacturing Company won first. For the most educational booth the Associated Beet Sugar Companies of Utah won first. Models were used to display the legends they sought to drive home.

Upstairs in this building the United States Department of Agriculture had a most interesting and instructive display together with the United States Forestry Department.

Almost every helpful machine in the home and on the farm was shown in the farm machinery section ,with an attendant to properly and fully explain each one.

Poultry Building Full.

A building set apart for this department was filled completely with poultry and rabbit displays. Space forbids mentioning any particulars on this part of the fair, but it was fully up to standard and revealed that poultry interests are growing in Utah.

The low entrance fee—25 cents for adults and 15 cents for children, with season tickets for a modest charge—resulted in a large attendance. Then the semi-annual conference of the Latter-Day Saints' Church, bringing attendance from practically every ward and state district in the whole country, Canada as well as the United States, the same week, swelled the number of visitors each day. On no single day was the attendance less than 10,000, and some days it approached if it did not equal 20,000 paid admissions. Utah surely shows other states how they should patronize their state fairs.

There is only one hog that fits high-priced land—the purebred. He has the stamina, the vigar and the body-building qualities that enable him to get right under those heavy land investments and carry them along.

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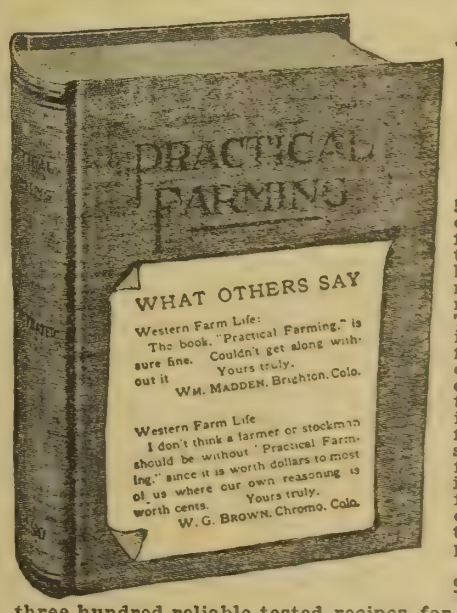

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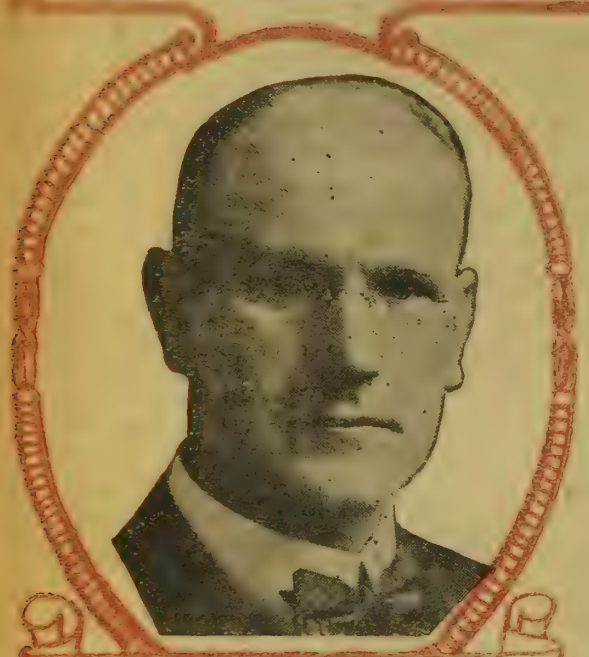

WHAT the Colorado farmer needs to enable him to get back on his feet is practical aid and intelligent, constructive measures from both national and state governments. Half-baked, visionary schemes of political theorists will hurt instead of help him. At a time when he cannot get enough cars to ship his products to market----and when he cannot get profitable prices for his products when he does succeed in shipping them ---the Colorado farmer cannot afford merely to listen to glittering words. What he must demand in this election is a positive record of some real accomplishments in his behalf and a worth-while pledge of actual, concrete action for his further relief. The Republican party recognizes the fact that the farm woman is the close partner in the business of farming and stock growing and, with this in mind, calls to the attention of both the farm woman and the man of the farm the following facts:

Many Helpful Measures Passed

The Republican party, both national and state, can proudly point to many specific measures passed during the last 18 months as the beginning of a carefully though-out program to help the farmer. It can also show the farmer definite plans for his continued benefit at an early date. The Democrats would have the farmer overlook their disastrous policies during and following the great war and now offer him nothing but ill-advised promises. These Democratic promises are in most instances ridiculous on their face and impossible of economical fulfilment. Any attempt to carry them out would only saddle the farmer with extra tax burdens. Please bear in mind how the Colorado farmer got into his present plight—a plight that has kept many farmers broke and discouraged for the past two years.

The True Causes of the Farmer's Plight

Every wise observer of present farming conditions can trace the cause unerringly to the sharp, immoderate deflation brought about by Democratic shortsightedness in suddenly and drastically restricting farm credits in 1919 and the early part of 1920, just before the Republicans took charge of the national administration. While some general distress was unavoidable in the necessary let-down from the tremendous war-time inflation, there was no excuse for making the farmer the goat. For those ill-considered Democratic deeds which ruined the farmer's market, called in farm loans, shut off vital farm credit, and made such inroads on the farmer's purse, the Democratic party should be made to answer at this Colorado election November 7. Will you make them answer by casting your vote for the straight Republican ticket, or will you once more give ear to false assurances and chance a repetition of the same bitter dose you have already received from their hands? Remember, a vote for Democratic candidates means that you approve of policies that have already brought many Colorado farmers to the brink of financial ruin—policies that clearly curried favor with city voters by reducing prices on farm products without compensating reductions on other prices to the farmers, and by taking care of metropolitan credit needs at the expense of the agricultural districts.

Remember, it was a Democratic secretary of the treasury—Houston—and his Democratic co-workers who ordered this drastic deflation that reflected on farm credits. Remember, too, that the freight car shortage of today, which has so seriously hindered moving this year's Colorado crops, is the direct result of Democratic acts. The car shortage is but the aftermath of the Democratic MISadministration of the railroads while under their Federal control. It follows their long and unpardonable heckling of the railroads—preventing the roads from providing for replacement of worn-out equipment. The railroad strikes that have made this car shortage so acute in 1922 are the outgrowth of the Adamson law—a Wilson administration measure which so aptly demonstrated the Democratic idea of temporizing and of placating one element in the country at the expense of the farmer. The Adamson law started the era of mounting labor costs on the farm and in all industry. This truckling bill was forced on the country by the Democratic willingness to trade railroad labor anything it wanted in exchange for its votes. That same weakness is again evident in a more sinister way in the present Colorado campaign. Beware of that party as you would of a plague. You surely cannot vote for Democrats on November 7 unless you wish to be stung twice in the same place. But, if you want to get the country's transportation facilities back to where the farmer can use them, WHEN AND AS HE NEEDS THEM, you will vote to retain the Republicans in charge of your national and state governments for two more years.

Just Su

Suppose you owned a fine farm—highly cultivated and improved—with buildings all in first-class order—and generally in a going condition.

Suppose you rented this farm for eight years to a tenant who told you he was a good tenant and would build up your place while he had it.

Suppose, even before the cyclone that devastated your farm about the middle of the eight-year lease period, your tenant was doing little toward improvement.

Suppose, after the cyclone went thru and did its damage, your tenant, instead of cleaning up the wreckage and trying to put your farm back on a producing basis, tried in every way to add to the damage already done.

Suppose he permitted Russian thistles to overrun the place and weeds to grow instead of crops; rills and ditches to ruin your hillsides; fences to fall down and the foundations of the buildings to crumble; boards to slip off the house and barn; and the paint to wear off everything.

Suppose he completed the destruction of your shade trees and orchards, and put your land generally in an impossible condition to grow any sort of crop. And suppose, in addition, he made debts that you were forced to assume.

What will yo on the 7th o

COMPARE THE

Compare the Republican candidates in this election with those on the Democratic ticket and you will soon note which candidates are the true friends of the Colorado farmers.

Consider Ben Griffith, Republican candidate for Governor—a man of the people, who paid his way through college and law school by working on Eastern Colorado ranches, who knows Colorado farming conditions and the needs of Colorado farmers intimately, who has a record of faithful public service behind him. Then consider the Democratic nominee, who was born with a silver spoon in his mouth, yet is the son of an acknowledged Socialist and is himself by training, instinct and desire a Socialist of the parlor variety instead of a real Democrat. This millionaire bond broker never did a day's work of

Vote the Entire

to the Farmer

WITH the advent of the present Republican national administration in March, 1921, the Republican party immediately began a constructive program of building which included betterment for the farmer and stockman. The results of this construction are already beginning to show in spite of the terrific amount of wreckage that was taken over at the end of the Democratic administration. Already, in line with this program, the Republicans can show absolute accomplishment in helping the farmer. Already the forces are in motion that will bring the farmer and stockman back to the prosperity that he deserves. Results of great economic upheavals cannot be changed over night. Regardless of what promises it may make, no party can do—or could have done—more to assist the farmer in a practical way, without hint of charity, than the Republican party has done during the past 18 months, still is doing today, and will continue to do if retained in office.

Robert F.
Rockwell
Republican Candidate For
Lieutenant Governor

Interested in Farmer's Welfare

The Republican party has realized that the welfare of the entire country depends primarily on the welfare of the farmer and stockman. These are the backbone of the nation's strength and wealth. Therefore it has labored earnestly and well to restore American farming to a profitable basis TO THE FARMER, not only as an act of justice to the farmer, but for the good of the nation as a whole. Secretary of Agriculture Wallace has truthfully said, in summarizing the Republican record up to October 20 of this year: "Since March, 1921, agriculture has had more attention and sympathetic consideration in the national capital than at any other like period in our history. Both Congress and the administration have appreciated the serious character of the agricultural depression and have done everything possible to make conditions better for the farmer."

pose—

Now, suppose that at the
l of eight years this tenant
ne to you and said: "I
uld like to remain another
r years." What would you
to him? Would you lease
him again?
Remembering that this ten-
t not only failed to make
improvements, but delib-
tely added to the destruc-
n that had already taken
ce, do you believe you could
ke a first class producing
m of it in the short period
eighteen months, especially
h the old, careless tenant,
a "minority party," hang-
around, finding fault,
ering and getting in your
y?
That is exactly what has
ppened in your government
these United States. The
publicans have been doing
ir very utmost to repair
great damage done to
nerican farming by the
reless, improvident, imprac-
al Democratic administra-
ns that preceded them.
e Republicans have accom-
shed many things toward
storing favorable conditions
the farmer in the past
hteen months, but they
ve not been able to repair
L of the accumulated dam-
e to you of eight years
thin that brief after-period.
Do you want the damage
LLY repaired, or do you
nt to have the old "tenant"
me back on the place?

answer be
November?

The Republican Record in Aiding Farmers

The Republican party has passed both Emergency and Permanent Tariff laws with flexible rate provisions to protect American farmers from competition of cheap foreign farm products. During the period immediately following the war and as soon as ships could be had, the accumulations of meat, wool, hides, etc., from Australia and South America; eggs, butter and potatoes from Denmark, and grain from Canada,were dumped into this country, at a loss to our farmers and stockmen. A Republican Congress passed an emergency tariff to stop this importation, but a Democratic President vetoed it. Immediately upon the inauguration of President Harding the Emergency Tariff was again passed, followed recently by a permanent Tariff Act, and as a result the importation of these foreign goods was stopped, leaving the markets of the United States to our own farmers and stockmen. This was the first tariff bill which protected the products of the farm, more than manufactured products of the East. As soon as the Republican Congress came into power they immediately amended the war finance corporation act, so that this billion-dollar fund could be loaned to the farmers and stockmen, and further increased the Federal Farm Loan Act, so that now one million dollars a day is being loaned to the farmers of this nation. Further realizing the difficulties in distribution, Congress passed the Co-operative Marketing Act, the Anti-Gambling and Grain Futures Act, the Packer-Stock Yards Control Act, and the Farm-to-Market Road bill ; the tax bill preventing sales or land taxes; the Immigration bill; the Cattle Tuberculosis appropriation bill; the bill for $2,000,000 relief to northwestern farmers and cattlemen; the appointment of a farmer on the Federal reserve board to prevent such disastrous juggling of the farmers' interests as occurred in 1919; substantial reductions of freight rates on farm products; a material reduction of the national debt by administrative economies; the prevention of the transfer of the forest service from agriculture to the interior department; a release of Federal reserve board credits to banks serving farmers, especially western beet growers; sufficient appropriations for the department of agriculture; and wider recognition given generally to farming in its relationship to other parts of industry.

In Colorado the Republican party has been equally alert to help the farmer. Governor Shoup, our Republican Governor, wishing to co-operate in Federal legislation and desiring to assist the incoming Colorado legislature in passing measures favorable to the farm and stock interests of the state, called together, before the assembling of the last regular session of the legislature, the heads of the four leading farm organizations of Colorado and asked them to prepare bills which would assist, in so far as legislation would go, in rectifying the difficulties the farmer was then experiencing. As a result, the Republican legislature passed and Governor Shoup signed all these bills in substantially the form in which they were prepared and introduced.

The Republican state administration has loaned $1,000,000 of land board funds to farmers; kept law and order, thereby avoiding industrial outbreaks, which hurt all business and increase taxes that the farmer must share; greatly improved Colorado highways and made our highway department more efficient. Although two-thirds of the taxes the farmer is now paying go for schools and good roads, the Republicans have lightened the other one-third of the farmer's taxes thru rigid economies in strictly state administrative expenses by means of a business-like budget system.

The Republican party proposes nationally: An agricultural financing system providing for long-time farm credits; budget system economies and reduced taxation; elimination of wasteful practices in distribution of farm products and betterment of co-operative marketing methods, including selling, warehousing, standardization and grading, and financing. Without government ownership or operation, it proposes friendly supervision, as shown in the packer control, grain trading and producers' co-operative association bills. It proposes constructive revision of the transportation act; the scientific reduction of freight rates; better terminal arrangements and routings for railroads, and better inland waterways to relieve rail congestion; it proposes to stop issues of tax-free securities; to add further strength to the Federal Farm Loan system; to investigate crop insurance; to adjust interstate irrigation water controversies; to gather and spread marketing information at home and abroad; and to pass many other measures intended to directly benefit the farmer.

The Republican party in Colorado proposes to further co-relate our state agricultural laws with national laws, particularly in regard to every practical phase of co-operative marketing, warehousing and financing for quick or long-time turnover. It proposes tax adjustment; betterment of terminal market facilities; consideration of open markets in towns for truck growers; better farming relationship with banking and other business; stronger support of the State Agricultural College; teaching the economics of production and distribution in the schools; and the loaning of state funds, with proper security, to finance legitimate farming operations.

CANDIDATES

manual labor on a farm or elsewhere, yet he is filled with fanciful schemes for the uplift of the farmer. As a public official he is untested and unknown.

Consider Robert F. Rockwell, Republican candidate for Lieutenant Governor, a real "dirt" farmer, a successful rancher and stockman, a taxpayer in four Colorado counties, an experienced business man and legislator, university-trained. Then consider his Democratic opponent, whose only claim to prominence is that he is a "wet" politician, that he cast the solitary vote in the Colorado Senate against Colorado's ratifying the Eighteenth Amendment, and that he kept the Prohibition plank OUT of the 1922 Democratic platform.

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PUMPS

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Alfalfa on Plains Farms.

Writing in Western Farm Life, relating to alfalfa, Mr. Parsons advocates the row system and cultivation until the alfalfa has a foothold. If non-irrigated land that is in a draw is worked so there is twenty-four inches of moisture, would it be suitable for alfalfa? It is twelve to fourteen feet to blue shale. If I plant the Grimm alfalfa in rows, will it stool out between the rows?—H. L. H., Otero county, Colo.

While it is true that alfalfa can be raised on high and dry ground by the row system, we hear complaints that the crop is hardly worth the work expended in keeping down the weeds. In draws and bottoms where there is usually some run-off from the hills it can very well be drilled in or broadcasted like a grain crop. Twenty-four inches of moist soil will do very well to start the crop and twelve to fourteen feet of soil with a hard bottom to hold the water is good. Alfalfa does not stool like grasses and grains, but although the roots remain single, the crowns enlarge every year.—E. R. Parsons.

Pasturing Kafir Sometimes Dangerous.

Would it be dangerous to turn cattle into a field of kafir, part of which has been cut and has a short second growth. The remainder was not cut because it was so small and stunted in growth. It has been frosted slightly.—F. B., Larimer county, Colo.

Practically all farmers who have grown cane or kafir for any length of time have learned from experience that the crop occasionally causes very serious poisoning. The poison is prussic acid which under certain conditions of growth is secreted in the leaves in such quantities to kill cattle when even very small quantities have been eaten. Veterinarians and experiment station workers have been studying this matter of prussic acid poisoning for a good many years and have yet much to learn as to how it acts and just what causes it. It has been generally accepted, however, that it is most dangerous when the normal growth of the crop has been interrupted or checked by some such condition as drouth or frost. The possibility of the poison being present in dangerous quantities seems to decrease as the plant approaches maturity. Cane or kafir plants with ripe seeds are seldom dangerous, especially if the growth has been normal.

The occasional losses almost invariably come from pasturing cattle on the crop. The curing of the forage seems to release the greater portion of the prussic acid even though it be present in dangerous quantities. This seems particularly true if the forage is cured slowly. Apparently silage made from kafir or cane is never dangerous.

No sure remedy for prussic acid poisoning has been found. Doses of corn syrup or large quantities of milk have been recommended and prove beneficial if the animal is not too far gone.

Recognizing the possibility of any stunted growth of any cane or kafir being poisonous it would be well to test out the field with a single animal of small value. Cattlemen must recognize that there is always a certain amount of risk involved in letting cattle graze on any of the sorghums. In view of these facts I cannot answer your question otherwise than to say you would be running some risk in turning your cattle into this kafir field.—G. C. W.

Deficiency Ration Causes Paralysis.

One of my shoats about 5½ months old refused to come out and eat one morning and an examination revealed that she was lame in one front leg. In an hour the lameness extended to the hind legs and she would fall from one side to the other in endeavoring to walk. This gilt died suddenly in the afternoon of the same day. The next morning one of the barrows developed similar symptoms. After three days this barrow began eating again, but could not support his weight on his hind legs. These shoats weigh about 100 pounds. A post-mortem of the one that died seemed to show that all the organs were normal. What is the trouble and is there anything that I can do for the rest of the hogs?—H. A. L., Logan county, Colo.

This is probably a case of swine paralysis, although the sudden death in one case is unusual. Swine paralysis has been discussed in these columns several times of late. It is presumed to be caused by a deficiency ration in most cases, but as a matter of fact, may be caused by many things.

Feed your hogs a wider ration, including beets, turnips, carrots, pumpkins, or other vegetable ration, and not too much of concentrates, like corn, barley, etc. For special treatment, codliver oil, and vita-mineral, are recommended.—G. H. G.

Tenant Compelled to Move.

I rented a farm upon which there is a coal mine, from a non-resident owner. the man operating the mine writing the contract as agent for the owner. Later the mine was leased to a company and I was given orders to move, which I did. The coal company was to pay me a small amount for vacating and also agreed to buy some small belongings left on the place. I have been unable to collect. Can I collect the amount coming to me from the owner of the farm or hold his share of the crop? Can I collect transportation for hauling a 6-year-old child to school, a distance of two and three-fourths? miles?—T. E. H., El Paso county, Colo.

If you have a contract and can prove what you say, you should be able to recover.

As to the hauling of the child to school, you can recover if you have a contract for doing it.—Hamlet J. Barry, Equitable Bldg., Denver.

Cow Suddenly Fails in Milk.

A cow giving three to four gallons of milk a day for the past seven months has suddenly fallen off until she gives only about a quart. She was on part dry and part green feed until two weeks ago, when she was put in a pasture of alfalfa and grass and had the run of a field containing ripe wheat. What is the cause of this sudden falling off in milk and what can I do to bring her back to her normal production? The cow eats well and has not shown any signs of sickness.—W. E. A., Idaho.

From the information given it is difficult to account for this sudden drop from three or four gallons a day to a quart. Nothing is stated as to the amount or character of the feed the cow was getting up to the change to alfalfa pasture. It would seem that a cow running on alfalfa with access to wheat grain would be able to get all the feed needed to keep up her milk flow. If the cow is bred it is possible she is far enough along to cause this sudden drop. Be sure she is getting plenty of feed.—G. C. W.

Cow Goes Blind.

A 7-year-old Jersey cow which we have milked since May developed symptoms of a cold, running at the nose and after four days seemed to recover. Seven or eight days later she went blind. She was dehorned in February and screw worms got into the wounds. Chloroform was used to destroy these worms. Could the chloroform have had anything to do with the blindness? The cow has run on Johnson grass pasture and has had no other feed except a little bran while she was sick. She grazes and drinks from an irrigating ditch, but does not seem to chew her cud. I do not think the trouble is pinkeye.—C. H. P., New Mexico.

Inflammation of the eyes (ophthalmia) in this case may be caused by nasal catarrh (cold), by catarrhal fever, infectious keratitis (pink eye), or from infection associated with removing the horns. The use of chloroform in treating the wounds is of no consequence in this connection. If the sinuses of the head are still diseased, following the operation of dehorning, it is not improbable that the eyes may have become involved as a consequence. In catarrhal fever there is loss of appetite and other grave symptoms which were apparently absent in this case. More than likely it is "pinkeye," but it may be from other infections or result from disease of the frontal sinus. Use a 3 per cent boric acid solution in the eyes twice a day. If there is a discharge from the head, where the horns were removed, this should receive special attention before recovery can be expected. —G. H. G.

Property Sold for Taxes.

Last year I had a piece of property sold for delinquent taxes. In the fall I was notified that the last notice was served concerning this year's taxes. I sent a check for the amount October 6, but it was returned with the statement that the last year's purchaser had paid this year's taxes and that I will have until October 20 to redeem the property. How must I proceed to avoid losing the property? We are so far from the county seat that it is difficult to obtain the desired information.—Mrs. E. L. G., Las Animas county, Colo.

You will have to redeem the property.—Hamlet J. Barry, Equitable Bldg., Denver.

Calves may be fed good silage when only a few weeks old.

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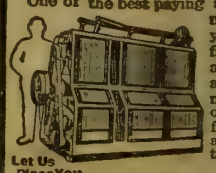

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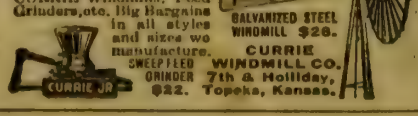

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Seed Show This Month.

Actual seed samples of standard varieties of crops raised in Colorado which have been registered will be shown at the State Seed Show in Colorado Springs, November 14 to 17. This will be an exhibition of registered stock from all parts of the state. It will provide an opportunity for locating good seed and making arrangements for purchasing the quantities needed. Farmers throughout the state will be able to see here just what registered seed is like and learn what results have been obtained through its use.

The seed classes in the show will include the standard varieties of corn, Marquis and Defiance wheat, Success and California Feed Barleys, Colorado 37, Abundance and Nebraska 21 oats; Petkus and Rosen rye; the standard varieties of potatoes. Another important feature announced is that this will be the final State Corn Show of the Boys' and Girls' Corn Club members.

Registered seed must be produced from registered seed. It must be planted on clean land and so cared for that there is no mixture in the seed harvested. Each field to be registered is inspected by agents from the Extension Service of the Agricultural College and a growers' committee, to see that there is no mixture in the field. A sample of the seed after being prepared for sale, is sent to the Extension Service of the College and here it is subjected to a bin inspection test and seed laboratory test by the State Seed Laboratory. If then the sample proves to be exceptionally good seed and pure with good germination, that lot is registered and given a registration certificate and number. In this manner the Extension Service hopes to be of help to the farmer in maintaining good seed stocks in the various counties of the state.—Waldo Kidder, Extension Agronomist, Colorado Agricultural College.

Must Wipe Out Tuberculosis.

Fifty-four per cent of the children of the city of New York, that have tuberculosis, have contracted the bovine type, or, in other words, got the disease through the medium of the dairy cow. The United States Department of Agriculture shows by its statistics that at present the situation is by no means as serious as this in Colorado, but this is the time to prevent such a catastrophe coming upon us.

The dairy farmer in Colorado is demanding a better market for his produce, and one way that he can obtain this is to advertise his own product, and in advertising it, make sure that it is a clean product. The buying public requires a produet free from contamination of any kind. The dairyman has the best food on earth to sell, and he can sell it if he will stand by his own business and not offer to the public a quality that he would not buy himself.

If we are to preach greater consumption of the world's best food, that food must be clean, and the only way to insure cleanliness of raw milk from the tuberculosis standpoint, is to test the herd for tuberculosis. As a means of bringing this about the Federal Accredited Herd Plan was adopted.

Under the Federal Accredited herd plan, the owner receives the services of the testing free, government men doing the work. He has to agree to dispose of all reacting animals at a slaughter house under Federal inspection. The salvage is returned to the owner up to $50 an animal for grades, and $100 for purebreds. Surely nothing could be more fair.

There are in the United States 244,871 herds under Federal supervision for tuberculosis eradication at the present time. , Colorado, with its adaptability to dairying, cannot afford to lag behind. Colorado dairymen must insure a clean product by not only keeping the separators clean, sterilizing the utensils and cleaning the cows, but by applying for tuberculosis testing in order to eliminate all animals having this disease. Having a herd on the Federarl accredited list would be of distinct value to any dairyman in facilitating the sale of milk or surplus breeding stock.

Be fair with yourself and with your family and the persons that drink your milk. Applications for tuberculin testing under the government accredited herd plan should be sent to Dr. W. E. Howe, Room 444, Post Office Building, Denver, Colo.—Harold R. Lascelles, State Dairy Commission.

Canning powders advertised as preventives against food poisoning cannot be depended upon, according to the bureau of chemistry of the United States Department of Agriculture.

Market Outlook for Farm and Ranch Products.

(Continued from Page 5.)

transferring grain to ocean vessels, but it is not fast enough to supply the foreign demand and some United States wheat is being sold abroad right along, although it is poorer in quality and about 13 cents higher in price. Congestion at Buffalo prevents a rapid movement to the seaboard through that point.

Big Advance in Corn Prices.

Corn prices have advanced even more than wheat from the low point of the year and are now the highest since January, 1921. Receipts have been larger than usual for this time of the year, but domestic distributors and exporters have been taking it as fast as it arrived and drawing upon visible supply stocks in addition. It is possible that the advance has reached its limits for the time being, since our market is out of line with Argentine corn at present and the most urgent domestic demand may have been provided for. The long-distance outlook is strong, however, since consumptive needs this year are certain to be unusually large.

Oats prices are trailing after corn. There is some export demand and domestic distribution is satisfactory, as the high quality of the new crop is attractive to consumers who were loathe to take the inferior oats produced last year.

Cash Grain Markets.

The range of cash grain prices follows:

Kansas City—Wheat, No. 2 hard, $1.15@1.24; No. 3, $1.14@1.25.

Corn—No. 2 mixed 67@72c; No. 2 yellow, 71@74c; No. 2 white, 67@71c.

Oats—No. 2 white, 44½@45c; No. 3, 43@43½c.

Hay Market Firm.

Hay markets remain firm and are gradually working upward. Fall demand is fairly brisk, while receipts and country loadings are light, notwithstanding the big crop. Car shortage is interfering with shipments. Prices per ton in carlots:

Kansas City—Prairie upland No. 1, $14@14.50; No. 2, $12.50@13.50; alfalfa, choice $24@25; No. 1, $21.50@23.50; standard, $18@21; No. 2, $15.50@17.50; No. 1 timothy, $15@16; No. 2, $12@13; No. 1 light clover mixed, $14.50@15.50; No. 1 clover mixed, $12.50@14; straw, $8.50@9.

Egg Prices Holding Well.

The fresh egg market has advanced 75 per cent from the low point of the year, which was reached in August, and the higher level is well sustained. Receipts at the leading markets since October 1 have been a little lighter than last year, but counting the reduction in cold-storage holdings the rate of consumption is larger than a year ago. The huge surplus of storage eggs is not being drawn upon as rapidly as during September, however. Further advances in fresh egg prices are probable as they become more scarce, but storage eggs are apt to be relatively cheap all winter.

Poultry receipts since October 1 have not been as heavy as in the same period last year in spite of the increase in poultry production. Storage stocks have not begun to increase materially as yet.

Latest quotations:

Kansas City—Eggs: Firsts, 32c; seconds, 22c. Live poultry—Broilers, 20c; springs, 16c; heavy hens, 20c; light hens, 14c; roosters, 10c; turkeys, 30c; ducks, 18c; geese, 8c.

Denver—Eggs, 32@38c. Live poultry—Hens, 20c; springs, 17@18c; broilers, 22c; roosters, 7c; turkeys, 27c.

Advance in Butter Resumed.

After a short breathing spell the advance in butter prices has been resumed. Receipts at leading markets have fallen off in the last week or two, and the rate of consumption remains unusually high. A feature of the week was improved demand for undergrades and centralized storage butter. Prices on 92-score fresh butter on October 18 were:

Chicago, 44½c; New York, 46c; Boston, 46c; Philadelphia, 47c.

Fruits and Vegetables.

The nineteen leading late potato producing states have shipped about 16,000 fewer cars up to October 14 than to the same date last year. Their crop is considerably larger than a year ago, so that dissatisfaction with prices and car shortage are largely responsible for the retarded movement. Some of the northern states are giving potatoes priority over grain to facilitate disposal of the crop before freezing weather. Northern round whites sacked are quoted at 95c to $1.50 per hundred pounds on midwestern markets; No. 1 Brown Beauties and Russets are bringing 60c to 65c sacked in wagon-loads at Colorado shipping points, while Rurals are bringing 60c to 75c at Idaho points.

The Department of Agriculture confirms the prevalent opinion that the increase in the apple crop this year is more largely in the early varieties than in the late keepers. Shipments of barreled apples thus far have been about 40 per cent larger than to the same date last year, while boxed apples show a decline in the carlot movement of about 50 per cent. The market for winter varieties is slowly gaining strength with A 2½ Midwest Jonathans quoted at $5 to $6.50, and Grimes' Golden at $4.50 to $6 a barrel on the leading central western markets. Northwestern extra fancy large Jonathans are bringing $2.75 to $3 a box at Chicago.

State Fair Awards.

The following list of awards at the Colorado State Fair was crowded out of our issue of October 15:

Berkshire Hogs.

The Berkshire show was made by C. W. Henry of Greeley, Colo., and the Colorado State Reformatory, Buena Vista. The awards follow:

Aged boar—1 (senior champion), Colorado State Reformatory; 2, Henry.
Junior boar pig—1 (junior and grand champion), Henry; 2, Henry.
Aged sow—1 (senior champion), Henry.
Junior sow pig—1 (junior and grand champion), 3 and 4, Henry; 2, State Reformatory.
Young herd, produce of sow and get of sire—Henry.

Chester White Hogs.

I. F. Rockey, Saguache, Colo., and M. & F. Ball of Pierce, Colo., were the only exhibitors. The awards follow:

Aged boar—1, Rockey.
Junior yearling boar—1 Ball.
Junior boar pig—1, 2 and 3, Ball.
Aged sow—1, 2 and 3, Ball; 4, Rockey.
Junior sow pig—1, 2 and 4, Ball; 3, Rockey.
Senior, junior and grand champion boar—Ball.
Senior, junior and grand champion sow—Ball.
Aged herd—Ball.
Young herd—1, Ball; 2, Rockey.
Get of sire—1, Ball; 2, Rockey.
Produce of sow—1, Ball; 2, Rockey.

Tamworth Hogs.

All places went to J. C. Hale, Las Animas, Colo., the only herd showing.

Fat Barrows.

Poland China, under 6 months—1, C. A. C.
Hampshire, under 1 year—1, Frink.
Hampshire, under 6 months—1 and 2, Frink.
Duroc Jersey, under 1 year—1 and 2, C. A. C.; 3, Crowe; 4, Rocky Ford Duroc Co.
Duroc Jersey, under 6 months—1, Rocky Ford Duroc Co.; 2 and 3, C. A. C.; 4, Ayers.

Grand champion barrow, any age or breed—C. A. C. on Poland China barrow under 6 months.

Quality of Sheep Shown Good.

A larger number of breeds were represented in this division this year than ever before in the history of the fair, though there was little competition except in the Rambouillet and Hampshire classes. The quality of the show was good throughout and attracted much attention on the part of Colorado farmers, many of whom are becoming interested in mutton and wool production on a small scale, as part of their diversified farming operations.

Exhibitors—State Reformatory, Buena Vista, Colo.; Geo. T. Allen & Son, Lexington, Neb.; C. T. White & Son, Lexington, Neb.; Ed R. King, Monte Vista, Colo.; Jackson Investment Co.
Judge—Prof. Chas. I. Bray, Fort Collins, Colo.

Rambouillet Sheep.

Aged ram—1, Reformatory; 2, Allen & Son.
Ram, 1 year and under 2—1 (champion), King; 2, King; 3, Reformatory.
Ram under one year—1 and 3, Allen & Son; 2, Reformatory.
Ewe, 1 year and under 2—1 (champion), King; 2, Allen & Son; 3, Reformatory.
Ewe lamb—1 and 2, Allen & Son; 3, Reformatory.
Pen—1, Allen; 2, Reformatory.
Flock—1, Allen; 2, Reformatory.
Get of sire—1, Allen; 2, Reformatory.

Hampshire Sheep.

Aged ram, 1 (champion), 2 and 3, Allen.
Ram, under 1 year—1, Reformatory; 2 and 3, Jackson Investment Co.
Ram, 1 year and under 2—1 and 3, Colorado Reformatory; 2, Allen.
Ewe—1 year and under 2—1 (champion), Allen; 2 and 3, Reformatory.
Ewe lamb—1, Jackson; 2, Allen; 3, Reformatory.
Flock—1, Allen; 2, Reformatory.
Pen—1, Reformatory; 2, Allen.
Get of sire—1, Reformatory; 2, Allen.

A full flock of Oxfords and Lincolns were shown by Geo. T. Allen & Son, without competition. Cotswolds and Southdowns were also shown by the same firm, without competition. Shropshires were shown by C. T. White & Sons.

Good Showing of Horses.

The horse show, never a strong one in point of numbers, made up much of the lack in numbers by a showing of quality that speaks well for the breeders. A new name in the lists of exhibitors this year was that of Waite Phillips of Littleton, Colo., who is assembling a fine stud of both Percherons and American horses. Both the junior champions in the Percheron show were sired by Carnot, owned by W. S. Corsa of Whitehall, Ill. H. J. Gramlich of Lincoln, Neb., who judged the beef cattle, also tied the ribbons in the horse division.

Percheron Horses.

Exhibitors—State Reformatory, Buena Vista, Colo.; Highland Ranch, Denver; W. S. Dutch, Pueblo; John H. Thatcher, Jr., Pueblo.
Aged stallion—1, (senior and grand champion), Waite Phillips, on Vergonne 2nd; 2, Dutch, on Victor; 3, Colorado State Reformatory, on Iocarbel.
Stallion over 3 years—1, Thatcher, Jr., on Elmwood Compe.
Stallion over 2 years—1 (junior champion), Reformatory, on Carina 3d.
Stallion foal—1, Thatcher; 2, Reformatory.
Aged Mare—1 (senior and grand champion), Phillips on Lagitime; 2, Phillips, on Leaside Sylvia; 3, Reformatory, on Hounellie.
Mare over 3 years—1, Reformatory, on Grace Carnot.
Mare over 2 years—1, Thatcher, on Elmwood Mignon.
Mare over 1 year—1 (junior champion), Reformatory, on Carji.
Display draft horses owned in Colorado—1, Reformatory; 2, Phillips; 3, Thatcher.
Draft stallion and five colts, Colorado bred—1, Reformatory.
Draft mare, showing two colts—1, Reformatory.

American Saddle Horses.

Aged stallion—1, A. L. Allen, Pueblo, Colo.
Stallion over 1 and under 2 years—1, John H. Vorhees, Pueblo, Colo.
Aged mares—1 and 2, Phillips, on Madge Bride and Sue Harrison.
Mare over 2 years—1, Vorhees, on Princess Bluebell.

Standard Bred Horses.

Aged mare—1, A. L. Monahan, on Ruth R; 2, Vorhees, on Kitty Wilkes.
Mare over 1 year—1, Jack Lewis on My Captain.

Funds to Fight Rust.

Harrison Fuller, secretary of the Grain Rust Prevention Association, recently appeared before the Budget Committee in the Treasury Department and asked for an increase in the Federal appropriations to eradicate the barberry bush, the host plant to black stem rust of wheat. The Secretary of Agriculture turned in an estimate providing for $350,000, the same amount as was voted last year after the Grain Rust Prevention Association, the American Farm Bureau Federation and others had prevailed upon Congress to increase the fund from $200,000 which was originally carried in the bill. Mr. Fuller presented facts and figures showing the progress which is being made in the middle western states.

According to the Bureau of Public Roads 40 per cent of all trucks covering the highways are 1-ton capacity or less, 33 per cent from between one and two tons, and the balance heavier capacities.

Recent Range of Livestock Prices at Our Principal Markets.

Cattle—	Denver.	Kansas City	Omaha.
Medium heavy steers	$ 6.50@ 7.50	$6.65@ 8.75	$7.00@ 8.50
Common heavy steers	4.50@ 6.75	5.00@ 6.70	5.00@ 7.00
Good light steers	.....	7.85@10.50	8.25@10.50
Medium light steers	6.25@ 7.50	6.25@ 8.30	6.75@ 8.25
Common light steers	4.00@ 6.50	4.10@ 6.40	4.50@ 6.75
Common to choice butcher heifers	3.50@ 5.50	4.00@ 9.25	4.25@ 9.00
Common to choice butcher cows	3.00@ 4.50	3.60@ 6.50	3.50@ 6.50
Bologna and beef bulls	2.50@ 3.50	3.00@ 5.00	3.00@ 5.75
Canners and cutters, cows and heifers	1.50@ 2.50	2.25@ 3.60	2.00@ 3.75
Canner Steers	2.50@ 3.75	2.50@ 3.75	2.50@ 4.00
Medium to choice light veals	7.00@ 9.00	6.50@10.25	8.00@10.00
Common to choice heavy veals	3.00@ 7.00	3.50@ 7.25	5.50@ 8.25
Common to choice feeders (1000 lb. up)	5.00@ 7.25	5.25@ 8.15	5.75@ 8.00
Common to choice feeders (750-1,000 lb.)	4.50@ 7.00	5.15@ 8.00	5.25@ 5.75
Common to choice stocker steers	4.00@ 6.50	4.15@ 8.00	5.00@ 5.75
Common to choice stocker cows and heifers	2.75@ 4.50	3.00@ 5.75	3.50@ 5.00
Hogs—			
Top of Market	$ 9.75	$ 9.45	$ 9.45
Bulk of Sales	9.00@ 9.35	8.40@ 9.40	7.00@ 9.40
Heavy (250 lb. up)	8.50@ 9.00	8.35@ 9.35	7.85@ 9.25
Medium (200—250 lbs.)	9.25@ 9.75	8.15@ 9.45	8.25@ 9.45
Light (150—200 lb.)	9.25@ 9.50	8.35@ 9.40	8.80@ 9.45
Light Lights (130-150 lb.)	8.50@ 9.00	8.10@ 9.00	.....
Smooth packing sows (250 lb. up)	7.25@ 7.50	7.50@ 8.00	7.00@ 8.10
Medium to choice pigs (130 lb. down)	8.00@ 8.50	.....	.....
Stock pigs	8.00@ 8.50	8.00@ 9.00	7.25@ 9.00
Sheep and Lambs—			
Medium and prime lambs 84 lb. down)	$11.50@13.25	$12.00@14.25	$12.00@14.25
Culls and common lambs	8.00@11.50	8.00@12.00	8.50@11.75
Medium to choice ewes	3.50@ 5.25	4.25@ 6.50	5.00@ 6.00
Feeder lambs	11.00@13.00	11.75@13.50	12.25@13.85

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The Rural Household

Questions about home problems promptly answered by letter and through the magazine. Letters from women containing helpful suggestions for improvement of rural life are always welcome. Address all communications to Mary G. Collopy, Editor Home Department, Western Farm Life, Denver, Colo.

A laugh is just like sunshine;
It freshens all the day;
It tips the peak of life with light,
And drives the clouds away.

My Neighbor's Story.

This time my neighbor is little Barbara McBroom of El Paso county, Colo. She and her sisters have made a splendid investment in hogs this year. We asked how she earned the money and this is what she told us:

"When we were babies mother always bought us a bank and showed us how much fun it was to put pennies in it. So, ever since, my daddy, mother and grandmother, have given us all their pennies. Once a year we take the money out of our banks and deposit it in the savings bank. We each have a bank book and we get interest on this money. We spend our money for Christmas and birthdays, but not for candy. We often earn money. We sold some muskrat skins and we cut and picked potatoes. Every time we find a new hen's nest we get a nickel, and we cut thistles around the field, too, and we picked up chips and took them to town to our grandmother."

"Mrs. Jones Is Taking Yeast."

"Mrs. Jones is taking yeast and she is reducing wonderfully." Or "Mrs. Brown is taking yeast and is gaining every day." Have you heard these remarks? Of course you have! Some take "regular yeast cake" and some buy the "tablets." It seems there is now a very important word, "vitamin," in the vocabulary of folks who are interested in building up or keeping up their bodies and who are very concerned over the nourishment of their young children.

Very well, if vitamines are so worth having we will have them, of course, but do we need to buy commercial vitamin preparations? The following abstract of an article written by McCollum and Simmonds helps us to decide:

"The term vitamin refers to individual substances referred to as vitamin A, vitamin B, and vitamin C. The existence of a fourth one has been recently demonstrated. Owing to the rapid growth of the traffic in commercial vitamins it was thought important to examine these preparations for the most stable of these, or vitamin B, since that is the most promoted commercially.

Six commercial preparations were tested for vitamin B. An examination of the labels on the containers divulged propaganda so long inflicted upon the American public. The vitamin preparations were represented as specific remedies for the same collection of illnesses listed on blood-purifier remedies.

The results of feeding tests indicate that the claims set forth on the labels were extravagant and misleading. The preparations were found to not contain the vitamin B in concentrated form as represented.

McCollum and Simmonds conclude with a simple statement of dietary rules which, if adhered to, will secure a great abundance of vitamins in each day's food supply.

1. Salads should be eaten twice each day. This will insure the regular consumption of some raw fruit, raw cabbage, raw celery, tomatoes, lettuce, etc. The consumption of such foods provides an abundance of the anti-scorbutic substance (vitamin C), in which our diet of cooked foods is likely to be lacking.

2. Each day a liberal helping should be taken of some food which we would class as greens. These possess dietary properties which make them unique among vegetable foods. This practice will likewise go far toward correcting constipation, which is the bane of the existence of a large portion of our population.

3. Each day a quart of milk or its equivalent in the form of manufactured dairy products should be taken.

The remainder of the diet may be selected entirely on the basis of its appeal to the sense of taste.

Man Needs a Balanced Ration.

Feeding the family is as important as feeding the animals. Food, whether it be for man or animal, has two functions to perform:

First, to build up the body and repair wasted tissue.

Second, to furnish energy for the production of heat and motion.

By observing a few general suggestions it is possible to keep a diet well enough balanced for practical purposes.

Both the growth of the body and its working capacity are dependent upon the amount and kind of food we eat.

People must have protein substances to build up muscles and tissues. The protein is secured mainly from meats, eggs, milk and cheese, or from legumes and cereals.

The legumes and cereals have such a large per cent of starches and sugars that if we were to depend entirely upon vegetables for our protein we would eat too much of the starches and sugar. Furthermore, the vegetable protein is not so easily digested as that found in animal food. For these reasons it is usually thought best for us to eat a mixed diet and secure a considerable part of our protein from animal food.

The best energy-producing foods are sugars and starches in cereals and vegetables. Corn, wheat, potatoes and rice should make up a large part of our diet. The fats are used in the same way as the sugars and starches, but have a much higher energy and fuel value and should be taken in much smaller quantities.

Fat is secured from butter, olives, fat meats, nuts, etc. Cereals and vegetables contain a small quantity of fat.

Fruits, green vegetables and relishes furnish bulk, juiciness, flavor and the needed mineral element.

Water helps to dissolve and distribute the foods in the body and carries off the waste material.

A great deal of water is supplied to us through food material, such as milk and green vegetables, but this is not a sufficient amount. People should drink a great deal of water beside that consumed with meals.—Zella Wigant.

Use More Apples.

It is a trite saying that "An apple a day keeps the doctor away," but one Colorado woman who is the perfect picture of health, says: "If an apple a day keeps the doctor away, what will seven apples do?"

Those who have apple orchards realize the market situation at present. Women in fruit districts are urging more extensive use of apples, raw and cooked. Let us do our best to utilize the crop we have on our hands. Send in your suggestions of recipes. In the meantime, try the following:

1. Bake apples with a few nuts or raisins in center.

2. Sprinkle apples with brown sugar and bake.

3. Use plenty of apple salad.

4. Plain apple sauce, sprinkled with shredded cocoanut and served in sauce dishes often answers the question: "How can I get rid of that bowl of apple sauce?"

Our Fashion Service.

All patterns 12 cents each. Address Western Farm Life, Pattern Department, 1518 Court Place, Denver, Colo.

Read This Before Ordering: Patterns ordered through this magazine are mailed promptly from the factory at Brooklyn, N. Y., and arrive in 10 to 12 days from time order reaches Western Farm Life. Be sure to specify size and number of patterns. Write your name and postoffice address plainly to avoid delay. These patterns are handled at cost, as a service to our women readers. The price of 12 cents includes postage.

4150—A Pleasing Model. This pretty frock may be made without the jumper portions. It is a good style for gabardine, serge, taffeta, or linen, and also for gingham and other wash fabrics. The pattern is cut in four sizes: 4, 6, 8 and 10 years. A 6-year size requires 3½ yards of 32-inch material. For jumper alone 1⅝ yard of 32-inch material is required.

3862—A Good Romper Style. The way to be comfortable at play is to be attired in a garment of this kind. It may be fashioned from gingham or percale. This interesting model has outstanding pockets that will hold attractions for any "youngster." The pattern is cut in four sizes: 1, 2, 3 and 4 years. A 2-year size requires 3¼ yards of 27-inch material. For very young children, the inner seam edges on the bloomers portions may be finished to close with buttons and buttonholes.

4160—A Stylish Afternoon Dress. This is a splendid model for mature figures. It features the low waistline and surplice closing now so popular. The sleeve may be finished in ¾ or in elbow length. The pattern is cut in seven sizes: 36, 38, 40, 42, 44, 46 and 48 inches bust measure. A 38-inch size requires 4¾ yards of 40-inch material. The width of the skirt with plaits extended is 2½ yards.

4135-4113—A Dressy Costume. Canton crepe in a new shade of brown, and lace

bands dyed to match, was used to develop this pleasing design. One could use kasha cloth or gabardine, with embroidery or braid for trimming. The Waist Pattern 4135, is cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. The Skirt pattern 4113 is cut in seven sizes: 25, 27, 29, 31, 33, 35 and 37 inches waist measure. The width at the foot is 2⅛ yards. To make this costume for a medium size requires 6⅞ yards of 32-inch material.

TWO separate patterns, mailed to any address on receipt of 12c FOR EACH pattern, in silver or stamps.

4153.—A Dainty Dress for Dance or Party. Soft fabrics such as Canton crepe, or crepe de chine, are best for a dress of this kind, but it is also nice for voile and organdy. The drapery may be omitted on the skirt as well as on the waist, as shown in a smaller illustration, and the sleeve finished in short or wrist length Picot or hemstitching is simple and effective for decoration. The pattern is cut in four sizes: 8, 10, 12 and 14 years. A 10-year size requires 4½ yards of 32-inch material.

4102—A Comfortable Coat. A good feature of this style is the convertible collar. It may be rolled high with the coat buttoned close to the neck, or rolled low with the coat fronts open. This is a very popular model, good for all coatings. The pattern is cut in five sizes: 6, 8, 10, 12 and 14 years. A 10-year size requires 4 yards of 44-inch material.

3866—A Youthful One-Piece Model. Another attractive version of an ever-popular style is portrayed here. The lines are smart and youthful. Any of this seasons dress materials may be used to develop the dress, which will be becoming to slender as well as to mature figures. Braided or embroidered serge or jersey cloth is good for this model. The pattern is cut in three sizes: 16, 18 and 20 years. An 18-year-size requires 4⅝ yards of 38-inch material. The width at the foot is 2 yards.

4162—A Good Service Dress for Slender or Stout Figures. Comfortable fulness and slenderizing lines mark this desirable model. The back extends over the fronts to form yoke sections to which the fronts are gathered. This is a good style for percale, gingham, gabardine and flannelette. The sleeve may be in wrist length or short, as illustrated. The pattern is cut in seven sizes: 36, 38, 40, 42, 44, 46 and 48 inches bust measure. A 38-inch size requires 6⅛ yards of 32-inch material. The width at the foot is 2¾ yards.

The First American.

(Continued from Page 7.)

And by means of it I set the hounds on your scent. Are you a wizard? For they came home an hour ago, yelping and cringing, so weak and miserable that they could scarce walk. And now, it seems, you are the man who is summoned to——"

He stiffened to "attention," his eyes fixed on the door by which I had just entered. I turned to learn the reason. On the threshold stood a robed majordomo with ivory-crowned staff. The majordomo nodded to the captain and withdrew. The captain beckoned me to follow.

He walked at my side, drawn sword in hand, and three men-at-arms, by his order, brought up the rear. Evidently my startled friend, the captain, was resolved to take no more chances of my "vanishing."

Up the stairs we tramped, along the gorgeous foyer and up a second, broader flight of steps. Then down a carpeted passageway, with tapestry-hung walls.

We stopped at an ante-room and the captain motioned me to enter. A valet de chambre who stood there entered an inner room, returned a moment later, and signaled me to follow.

I went forward, the captain and his men remaining in the anteroom. I found myself in a large, splendidly furnished apartment, lighted only by a candelabrum that stood on a paper-littered table in the center.

At this table, his back to me, sat a man writing. He was clad in a scarlet robe, and wore a velvet cap of the same hue.

His back was toward me, I say. Yet I knew him at a glance.

CHAPTER IX.

"Into the Fire."

Yes, I knew him. Those narrow shoulders, the wizened neck, the sparse, grizzled hair, the "set" of the head—all were unmistakable.

It was the "Little Gray Man!"

Incredible—but certain, true. The shabby gray garments and the furtive, ratlike air had been replaced by priceless robes and a manner of icy majesty.

Yet, there was no doubt in my mind as to his identity—even before he slowly turned his head and fixed me with those piercing little black eyes of his.

You will laugh, but only one thought rushed to my mind—only one incongruous speech to my lips as I beheld him.

"The snuff-box," I blurted out. "It was taken from me when I was arrested. By the Marquis des Ems. I am sorry. I did my best to return it to you."

The valet de chambre tugged at my sleeve.

"Say, 'Your eminence,'" he whispered reprovingly.

"His eminence!"

I fairly gasped.

So this scarlet-clad personage—the little gray man—was His Eminence, Armand Jean du Plesis, Cardinal de Richelieu, uncrowned king of France!

And I had addressed him as if he were an upper servant.

I stared stupidly at the slender, robed figure, my gaze riveted at length by the magic power of those black, snakelike eyes.

Armand de Richelieu, at this time (1632) was barely 47 years old. He looked nearer 70. Ill health and the cares of state, but chiefly the consuming inward fires of his own spirit, had aged and enfeebled him. One had the impression of a worn-out body kept alive and active by a will of chilled steel.

He had been affixing to some papers a great seal. And, my eyes leaving his for a second, I recognized its crest as the same I had seen on the uniform cloak and the coach panels. Small wonder the footpads had fled at sight of it!

I saw, too, at one end of the table, a pile of manuscript pages, whose fine, cramped chirography was arranged in drama form. I recalled the slip of paper that had evidently been the fly-leaf of a play.

And I learned thus, for the first time, that the man who swayed all France was also a playwriter. (I was to hear in days to come that, by an odd freak of a great mind, he was far less proud of his glorious statesmanship than of his very mediocre, though ponderous dramas.)

For a full half minute we looked at each other without speaking. Then, in that dry, rasping voice of his, he said coldly:

"Well, sir?"

"Well, your eminence?" I replied, stupidly enough.

He had turned full about now, and was sitting facing me.

"You spoke of a snuff-box, I think," said he at last. "Is this, by any chance, the one to which you refer?"

He drew from his robe the glistening bauble that had caused me so much trouble. Yes, it was the same. There could be no doubt as to those queer hieroglyphics on the lid.

But how, in the name of all that is impossible, had it come again into his possession?

I peered with owlish surprise at the box. The cardinal seemed to relish my dismay.

"You recognize the trinket, I see," he remarked.

"I do, indeed. But how the deuce—that is to say, how did your eminence come by it?"

"That is not the question," said he. "Nor are you here to ask questions at all, but to answer them. The point is, how did you chance to have this thing?"

"It fell from your eminence's pocket as you were galloping away from Auteuil this morning. I picked it up. But you had gone out of hearing. A cavalier—the Marquis des Ems—rode up and demanded it. He backed his demands by the show of force, and I was obliged to leave him unhorsed at the roadside.

"I followed your eminence through the streets this evening to return it, but you gave me the slip. Your guard-captain on sight of it had seized me. A group of gallants, beholding it, saluted me as a superior. The Marquis des Ems——"

"What tissue of idiotic moonshine is this?" he broke in peevishly. "Your tale is as shambingly incoherent and improbable as a drunken shipman's. Can you devise none better?"

"Your eminence," I retorted, "I have spoken the truth, as is my habit. And no man, be he cardinal or pauper, has the right to doubt my word."

"Tush!" he rebuked. "Bring no colonial swaggering into my palace. I am the Cardinal Richelieu, and——"

"And I am Hugh Mallock, American!" I broke in. "I am not here by my own will or through any crime of mine. Therefore, I have the right to resent——"

"Canaille!" gasped the horrified valet de chambre. "Do you know to whom you speak? Monsignieur, shall I summon the guard to——"

"Be still, Laroque!" ordered his eminence, as one might quiet a growling lapdog. "Your tongue wags overfreely for France, my American friend," he resumed, turning again to me. Be careful lest its own noise should cause it to be stilled forever."

His words and his face were stern. Yet, somehow, I got the idea he was not half displeased at my boldness. When he spoke again it was with calm, judicial utterance.

"You told me this morning at Auteuil," said he, "that you were new to France. If that be true—and if your tale of the snuff-box be true—let me read you a one-minute lecture on French politics:

"France today is as a ship steering a straight course through a tempestuous sea. If the helmsman's hand be firm, and if his brain be wise, the ship will weather the storm. If he be torn from the helm, the ship will lie helpless, at the mercy of the billows. I am the helmsman."

He paused, then went on:

"From time to time some misguided man, or woman, or collection of malcontents, strives to hurl me from the helm. Were not such persons punished, at once and severely, the ship of state would soon be without a steersman. Several such attempts, therefore, I have punished. Not for their menace to me, but to the welfare of France.

"Other plots constantly spring up. One is afoot even now. By my spies I have learned for weeks of its every move. The poor fools! To pit their puny force against Armand de Richelieu's!"

The last words were muttered in fierce contempt, under his breath; to himself rather than to me. Then, more calmly:

"A man close to the throne heads a conspiracy for my ruin. In court, in city, and in camp he has found recruits for his wretched cause. I have let the plot grow until I could crush it, full-blown. The hour has struck. And no man—save only the leader, who crouches for safety behind the cloak of his brother, the king—shall escape. The secret seal of the conspiracy, the rallying sign, the 'open sesame,' is a certain symbol. Every conspirator knows it. It is also known to me and to one or two of my most trusted officers and spies."

He lifted the snuff-box and pointed one lean finger at the hieroglyph upon its lid.

"There!" he said quietly.

I started. Now I began at last to see faint light through the cloud of murky mystery.

I could partly understand why Des Ems had desired to keep the snuff-box from falling into the wrong hands; why Richelieu's trusted captain had ordered the capture of the man who carried the treasonable emblem; why counters who evidently belonged to the conspiracy should have recognized it, and should thus have mistaken me for one of the plot's leaders.

My thoughts then took a leap that left me cold and trembling. Within that snuff-box was Claire de Sieux's portrait. Richelieu had said that not one conspirator should escape unpunished. Would not the fact that her likeness was in the hieroglyphical box implicate her in his suspicions and his vengeance?

For an instant I was minded to save her by springing upon the feeble, yet all powerful, cardinal and slaying him. I glanced down furtively to his face.

And as again our eyes met, I had a strange, uncanny feeling that he was reading my every thought as if it were written on an open page.

"No. M. l'Americain," he cried quizzically, "she is not involved. Rest assured."

I gasped my crass amazement. The man had read me. It gave me a shiver of almost supernatural dread. Then I straightened myself and waited, silent.

"The fact that you had this box in your possession," said the cardinal, "draws suspicion strongly toward you. Coupled with the impossible cock-and-bull story of your adventure with it and of your manner of finding it, this makes your guilt hard to disprove. Yet I am just. I am ready to hear your defense. Speak on."

"I have already told your eminence the truth," I replied steadily. "I have no change to make in my story. Believe it or not, as you will."

"Believe it?" he mocked. "Believe that I dropped this box from my pocket—that I would be carrying about with me the sign-manual of my enemies? A likely story, forsooth! As well believe that the condemned criminal would carry the hangman's noose in his pocket."

"Is it more unlikely," said I coolly, "that that His Eminence Armand Jean du Plessis, Cardinal de Richelieu, should be found, ill-dressed, disguised and alone, in a country lane, fighting for his life with four footpads?"

"Ah!" he grunted. "A graceful way of reminding me that you saved me from death this morning? It shall not serve you, sir, if you are found guilty. You saved the life of Richelieu, the man—the poor, disease-wrecked old body of a world-weary prelate.

"But if it be proved you have conspired against the power of Richelieu, the rescuer and preserver of France, you shall pay for it with your neck. Is that clear?"

"Perfectly," I answered, with an assurance I was far from feeling. "As I understand it, my life hangs on a thread. My unsupported word is my sole defense. And that word your eminence is pleased to doubt. Therefore, it seems, I am doomed."

"You take it calmly," he commented.

"Why not? From childhood my father taught me that mere death is not to be feared; but that dishonor is the one thing a brave man may reasonably dread. My honor is clear."

"Is there no one who could substantiate any part of your tale?"

I thought of Claire. But she could not be further brought into the affair without peril to her own safety. I shook my head.

"As you will," observed his eminence with a shrug, as if dismissing a tedious theme.

He glanced toward the ante-room as though to summon the guard to lead me away. Then apparently changing his mind, he said:

"I have matters of greater import to attend to now. But later I may wish to question you on your second offense—on your disobedience of the edict against dueling. Stand over there, to one side."

I moved to the farther wall. The cardinal made a sign to the valet de chambre. The latter moved to still another door than the one through which I had come, and threw it open.

"His eminence will see you now," he called to some one.

A man hurried blusteringly into the room in reply to the summons. It was the Marquis des Ems.

(To be continued.)

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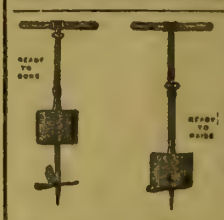

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To meet the demands of many farmers, the morning session during Farmers' Week will be devoted to schools on crops, livestock, poultry, home economics and other practical subjects. The program will be ready for distribution soon. Copies may be had on application to the Extension Service of Colorado Agricultural College, Fort Collins.

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Trapping for the Farm Boy.

When asked to write some articles on trapping for Western Farm Life, a number of happy incidents in my own trapping experiences in the mountains of Colorado came to mind, leaving me almost in a mood to toss my typewriter into the waste basket and set foot on God's great out-of-doors once more. It is with feeling almost akin to envy that I think af all the fun you who read these articles will have during the next few months.

To the lover of outdoor life there is no sport so truly fascinating as is trapping. To throw a bundle of traps over your shoulder and set out in search of signs of coyotes, mink, muskrat and other fur-bearers, is to feel the true joy of living. And it is a pleasure within the reach of every farm boy or man.

In addition to the genuine fun to be derived from trapping there is nothing which offers such a splendid opportunity for the ranch and farm boy to make some easy spending money as does trapping. I have known a number of boys who have cleared several hundred dollars in a single season from the sale of their furs. If one takes an interest in the work it is not at all hard to catch a large number of skins and with coyotes selling up to $10 and $12, and muskrats bringing $2 and $3, and all other furs in proportion, it is easy to see the money-making possibilities of spare-time trapping. Practically all the leading fur buyers nowadays furnish books on trapping free and by studying methods contained in one or two of such pamphlets even the very young boy will be able to make some excellent catches.

After the animal has been captured the greatest care should be exercised in the skinning and stretching of the pelt. Most beginners are of the opinion that a skin should be stretched as tight as possible. This is, however, not at all the case. After all fat and flesh has been removed from the pelt it should be placed on a suitable stretcher just large enough to retain the skin without shrinking. If the skin is stretched too tight it is damaged and will grade as "thin-furred," thereby bringing less money than if it had been stretched to normal size only.

A great many skins also are partly damaged by being allowed to dry in the sun, or by a hot fire. It also is bad to allow a skin to become frozen while drying. Skins should be kept in a room of only moderate heat for the first two or three days after being removed from the animal. By doing this you will be sure to notice a difference in the size of your check.

It is through poor handling that many otherwise good pelts are ruined, causing some trappers to regard fur buyers as crooks because their skins have to be graded as 2s and 3s.

In order to fully understand the principles of trapping and fur handling I would strongly advise every one who intends to do any great amount of trapping, to obtain some of the "Harding Library" books, dealing with all phases of trapping and out-door life. These books can be purchased direct from the publishers or from your favorite fur dealer. This collection contains books on most every kind of fur-bearer, but for the average trapper "Science of Trapping" and "The Fur Buyers' Guide" makes an ideal reference set. The instruction contained therein will more than pay for the cost in the added value you will obtain for a few skins.—Emil C. Wahlstrum.

Profit in Mink Trapping.

Among the more common and plentiful types of fur-bearing animals, the mink is the most valuable. Though he is a tiny animal, with a body about a foot long, his pelt brings a handsome sum.

Being wily and cunning, and quick to detect the scent of a human trail, he must be hunted cautiously; but once his habits and instincts are well known, there is no great difficulty in outwitting and capturing him.

Gloves should be worn when traps and bait are set, in order to avoid leaving any human odor; and it is advisable also to wear rubber boots and to stand in water while setting the traps, where this is possible.

The haunts of the mink are along stream banks. Here he travels up and down, searching for fish, crabs and frogs; and investigating with lively curiosity all holes and nooks along the edge of the water.

Old trappers use various ways of catching the mink, but here is one that proves quite successful. Early in the fall, before the trapping season begins, dig holes from the water edge upward in the stream bank about two feet deep. By the time you are ready to trap, the mink will be familiar with these holes, and will not be suspicious.

Set your trap at the entrance of this hole about an inch under water. Use a No. 1 or No. 1½ trap, and be sure to cover it with mud, dead leaves or moss. Put your bait in the hole. This may consist of fish, rabbit, or fowl. The animal will be forced to pass over the trap in order to get to the bait.

Another method is to pick out a steep bank where you can hang the bait about a foot and a half above the trap, in such a manner that the mink will have to step on the trap to reach the bait.

A good bait scent is very helpful as a means of attracting the animals. At slight cost you may buy specially prepared and very effective scents offered by the big fur houses.

Mink are prime from the latter part of November to the first of February in the northern climate, and in December and January in the sections farther south.

Notorious Bear Killed.

The biggest and most notorius grizzly bear in Arizona was killed during the first week in June by a Government hunter employed by the Biological Survey of the United States Department of Agriculture, after considerable time and effort had been spent in trying to capture him.

The grizzly's persistent preying on livestock cost cattle owners at least $25,000, according to conservative estimates. One man, however, upon whose range the bear lived most of the time expressed the belief that the bear had eaten fully $75,000 worth of cattle. The Biological Survey inspector reported that the bear killed twelve head of cattle within one week, among them a purebred Hereford bull weighing 1,800 pounds. Cows and young calves, however, were the bear's favorite food.

Learning by Observation.

Visiting the ranches of practical farmers and stockmen is one of the most practical methods of teaching the boys and girls enrolled in agricultural clubs. Recently a party of sixty, including thirty-five club members and twenty-five adults from Lincoln county, visited the J. O. D. ranch at Aroya, Colo. Mr. J. D. Schilling, the proprietor of this ranch, specializes in beef cattle and hogs, hog production being the principal business. The visitors were shown 160 purebred Duroc Jersey sows, all bred for fall litter. The farrowing house is of the half monitor type and contains pens for 100 sows. A heating plant keeps this building warm for winter pigs and running water is piped into each farrowing pen. Colony houses are used to shelter the feeding and breeding stock. The feeding pens are equipped with cement floors and sanitation is one of the things which the owner of the ranch, Mr. J. D. Schilling, stresses in the handling of hogs.

Mr. Schilling conducted the visitors over the ranch and carefully explained all features of the equipment. He talked to the pig club members on the care and management of hogs, imparting valuable practical lessons, illustrated by what the young people saw as they went over the ranch.

Market type was emphasized and Mr. Schilling backed up his words by showing the right type, including some March boar pigs, a yearling herd sire and a two-year-old sire. This showing brought out the different stages in the life of a hog and impressed the points that should be looked for in selecting good individuals.

Good Wheat Yield.

A yield of twenty bushels of Kanred wheat was produced on a fifty acre field in the Mesa Verde section of southwest Colorado by George Jeep and son. Their Turkey Red wheat yielded only about eight bushels and their spring wheat was almost a total failure. The crop was grown without irrigation. Early in the spring conditions were such that a forty bushel yield might have been expected on all their wheat, but the unusually dry season greatly reduced it. The results obtained must be credited in part at least to the careful preparation of the ground. Most of it was plowed nine to ten inches deep last year. The Jeeps put out 150 acres of the Kanred variety this fall.

The motor vehicle industry paid special taxes in 1921 to the federal and state governments amounting to $228,759,000.

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Order traps and baits now. Send coupon below at once, for lowest prices on trappers supplies, get free samples NOXENT (kills human scent) and REMOV-A-SMEL (destroys skunk smell instantly). Get free Trappers Pardner showing all kinds of traps and new paste baits, game laws, how to trap and grade furs. We keep you posted on fur market all season. ALL FREE! SEND COUPON TODAY TO

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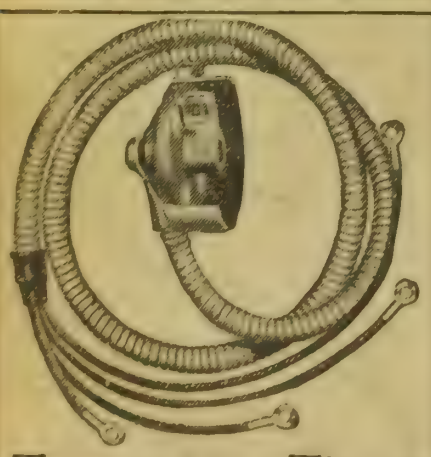
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Do You Want a Herd Bull?

Bulls for Sale—On Pages 22 and 23 you will find offered for sale bulls priced from $120 up. Cash or on terms.

Some Easy Money Can Be Pinched in Steel Traps.

(Continued from Page 6).

trance would catch the first animal attempting to enter or leave, and likely its cries and struggling scare the others out of the country.

A skunk den will have several trails leading away from it, and a trap should be set in each one, twenty-five to fifty feet away from the burrow. The trap chains ought to be fastened to a rock or pole clog, so the captured animal can drag it a hundred yards or so, and they will thus get out of the vicinity of the den.

Avoid Disturbing Surroundings.

When making sets around burrows and rock bluff dens, it is necessary not to disturb the surroundings or you will alarm the animals, which are remarkably familiar with the near-by objects. Besides, many animals, particularly the fox and mink, can readily smell a rusty, dirty trap, even if covered lightly with leaves or dry soil. If you catch a skunk, however, and it "scents" the trap, the set should be a good one for the rest of the season. Skunk odor will attract animals like the fox and mink, and a few feathers thrown around will increase the lure.

Effective trail sets mean finding a place where only the animal you want to catch will step into the trap. Where a fox crawls under a rail fence, or a skunk goes under a ledge or between two trees are the sort of places for trap sets. Sometimes a stick can be laid across the trail, or suspended about three inches high, which will cause rabbits to hop over the set.

Land set traps should be clogged to a weight that can be dragged slowly by the captured animal, or to the top of a small bush bent over and fastened. The idea is to prevent the animal getting a solid pull, as it would then in time twist its foot off and escape. A crippled animal invariably warns others, and except in the case of muskrats and skunks, careless trapping has a tendency to run the animals out of the country. The trapper must operate, in trapping all sly and cunning animals, so as not to leave signs or cripple game, then they will not seek safety in flight.

Squirrels Must Go.

A pound of poisoned bait costing 14 cents will kill enough squirrels to save $2 worth of crops and pasture, says County Agent Harry S. Wilson of Soda Springs, Idaho. Assisted by E. B. Perkins, specialist in rodent control, Mr. Wilson scattered 2,855 pounds of poisoned oats in six communities recently. In addition to this, Mr. Wilson has prepared and sold to the farmers at cost 2,304 pounds and on a four-days' drive distributed 1,392 pounds furnished by the United States Department of Agriculture. On the basis of Mr. Wilson's estimate the total saving to the county amounts to $13,102. The county commissioners have recognized the value of the squirrel extermination work and voted to adopt the state law for the county requiring all owners of land to poison the squirrels or have it done and have it charged to their taxes.

Find Just What You Want.

Whenever you are in need of anything for your farm, ranch or household, and do not know where to buy it, look over the Farmers' and Stockmens' Ready Reference Directory in this issue. There you will find almost everything under the sun offered for sale by reliable firms that will treat you right in both price and service.

In England there are 600 motor trucking companies carrying freight for distances of 100 miles or more.

Profitable Farm Poultry

PAUL C. JAMIESON.

Inquiries on all phases of poultry production promptly answered by mail. Letters telling of your experiences and successes always welcome. Address all communications to Poultry Department, Western Farm Life, Denver.

A common mistake in poultry house construction is building a structure so flimsy as to offer little resistance to winter storms.

Starting fattening turkeys on wheat and oats and gradually shifting to corn will prevent scours, which sometimes result when the turkeys are started on new corn.

Make your heavily fed young pullets work for their feed. If they are not kept busy they are likely to get too fat before they get to laying. There is not so much danger of their getting overly fat after they get the laying habit well established. Making them exercise does not mean necessarily that they should be compelled to scratch for every bit they get. If they work for their grain they will get enough exercise and can have free access to the mash or ground part of the ration.

Quality Poultry Show at State Fair.

The large poultry and pet stock exhibit building at the Colorado State Fair was filled this year. One whole aisle on each side was occupied by dogs. Alaska dogs, one-fourth wolf, bull dogs and all, were there and they made a great howling jubilee, but that didn't detract from the interest in the poultry show.

Quality stood out as the leading feature of the show this year. The birds looked a little ragged because most of them were molting, but the quality was certainly there. Judge James E. Tucker, from Michigan, said there were fewer disqualifications than in any year previous when he has been the judge. Mr. Tucker comes to Colorado regularly. We consider him one of the foremost judges in the United States.

The Rhode Island Reds were leading all others in numbers. Rocks and Leghorns, Anconas and Orpingtons carried away their share of blue ribbons.

The Colorado State Fair gives poultry breeders an excellent opportunity to show their stock. Sportsmanship and advertising are combined for the benefit of all. We hope the poultry exhibit will continue to grow and to improve in quality.

Bent County Poultrymen Enthusiastic.

A few years ago there was a good live poultry association at Las Animas, Colo. The organization went to sleep and some said it was dead. The Otero county poultry association with a delegation of poultrymen went to Las Animas this year to get exhibits for the Arkansas valley fair. The old boys were not dead at all. They took two truck loads of birds to Rocky Ford. They were also at the State Fair with the largest exhibit from any county. Ninety-one birds in all were trucked down from Las Animas to Pueblo, and they took back their share of blue ribbons.

Prevention of Blackhead in Turkeys.

Many complaints have been made the past few months of turkey losses. Investigations made in the pathology laboratory at the Colorado Agricultural College of many of these cases show the disease to be entero-hepatis, or as it is commonly known, blackhead. Dr. W. H. Feldman states that this infectious disease commonly attacks young turkeys during the first three months of their lives, although older turkeys also may be affected. It most often occurs in the fall. Affected birds appear sluggish and seem to tire easily, lack their usual appetite and have a dejected, unkempt appearance. Diarrhea is always noticed, the droppings being yellow in color, sometimes streaked with a brownish material, and rather soft in consistency. In the last stages, the head takes on a dark purple color; hence the name Blackhead. The duration of the disease is from two weeks to two months, and a large percentage of the affected birds die.

Upon opening a turkey dead of this condition attention is drawn at once to the abnormal appearance of the liver and intestines. The liver is often enlarged and distributed over the surface can be seen circular areas ⅛ to ¾ of an inch in diameter which are of a greenish, yellowish color. These areas are lower than the surrounding normal liver tissue and in this respect differ from the lesion of tuberculosis which is usually elevated. The intestine is somewhat larger than normal, due to the thickened walls, and to the touch they resemble rubber tubing somewhat, being a great deal harder and less flexible than the normal intestine. The passage way of the intestines is lessened in size and is filled with a cheesy material.

Dr. Feldman points out that the disease is a very stubborn one to treat, although crude catechu, ⅓ teaspoonful to the gallon of drinking water, has been recommended. The bird should be restricted to this water for drinking purposes during the first three months of life. He recommends the following preventative measures:

1. Taking care not to introduce diseased birds into healthy flocks.
2. Burning or burying deeply all birds dead of the disease.
3. Separation of the sick birds from the well.
4. Providing new runways of limited area for well birds.
5. Disinfection of quarters and yards with carbolic acid solution, 5 per cent.
6. Where the disease is rampant, it is probably best to dispose of the entire flock and wait two years before attempting to raise turkeys again on the same premises.

Good Returns From Poultry.

Mrs. E. G. Chamberlain, who helps her husband operate the Milky Way Dairy Farm, near Nucla, Colo., finds poultry a good combination with cows.

Nucla is fifty miles from the Denver & Rio Grande Western narrow gauge line, and there is no other railroad. Despite this handicap, Mrs. Chamberlain sends in the following summary of her poultry accounts, which she is keeping up-to-date, as a demonstration for the Colorado Agricultural College:

Inventory, March 15, 1922—Hens, 82; cock birds, 8. Inventory September 15, 1922—Hens, 33; pullets, 267; cockerels, 44; cock birds, 7. The income from March 15 to September 15, 1922, is as follows: Total returns, $286.46; total expense, $101.34; total profit to date, $184.92.

Feeding Potatoes to Hens.

I heard the other day that potatoes fed to chickens—(laying hens)—would stop them from laying; that potatoes were not good to feed to hens in any form. What do you know about it? I never fed many, so haven't had much experience. There are thousand of bushels of cull potatoes here and if they are good feed for chickens, they would be a cheap feed cooked or raw. What would you advise? Have you any data on this? If so, tell us about it.—E. W. W., Mesa county, Colo.

Potatoes fed in any quantity to laying hens will impair their laying. I have known the egg production of large flocks being reduced 50 per cent in a short time by feeding quantities of potatoes. Small amounts of potatoes can be fed provided they are given very sparingly. Even then they should not be the only green feed supplied to the hens. Cooked potatoes are not as harmful as raw ones. They should, however, be fed sparingly and only when mixed with other feeds. A bulletin, entitled "Feeding Hens for Egg Production," which you can obtain by writing to the Colorado Agricultural College, Ft. Collins, will be helpful.—P. C. J.

Number of Hens to One Gobbler.

How many gobblers should be kept for fifteen turkey hens? Also, how many does to one buck?—Mrs. W. H. D., Washington county, Colo.

One good thrifty tom is enough for fifteen hens. Farmers' Bulletin No. 1090, "Rabbit Raising," states that one buck is sufficient for ten or twelve does. You can get a copy of this bulletin by writing to the United States Department of Agriculture, Washington, D. C. You also can get a helpful bulletin on turkeys, entitled Farmers' Bulletin 791, "Turkey Raising."—G. C. W.

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Dairying and Hog Raising

All letters regarding commercial and technical features of dairy farming and hog production promptly answered. Address all communications to Dairy Department, Western Farm Life, Denver, Colorado.

Care should be taken that pigs of fall litters are well supplied with skim milk or tankage, especially after weaning.

Setting the cream separator upon pieces of ¾ inch pipe about 1½ inches long will facilitate cleaning the milk-house floor.

The protein content of grain rations for dairy cows should depend upon the roughages fed. Corn fodder and silage, Sudan grass, and prairie hay, require a high protein grain ration, while alfalfa or clover hay may be accompanied by a grain ration somewhat lower in protein.

"How many mortgage lifters have you?" This question printed on a little poster, and distributed among farmers at a recent celebration in an eastern Colorado community, is a forcible reminder that hogs are necessary on any well balanced program of farming under non-irrigated conditions.

Calves Fed Powdered Skim Milk.

Raising calves with a minimum amount of milk was the purpose of an experiment recently conducted at the Minnesota experiment station. Six calves were successfully raised using skim milk powder in place of ordinary skim milk. The experiment was under the direction of C. H. Eckles, the well-known dairy authority. The change from whole milk to the milk powder was made when the calves were three weeks old. At the end of sixty days the skim milk powder was gradually withdrawn from the ration. From the age of seventy days the calves were fed alfalfa hay and a standard grain mixture. At six months of age they were somewhat below normal, but attained the normal condition in both weight and height by the age of eight months.

Ten pounds of powdered skim milk added to ninety pounds of water will make one hundred pounds of normal skim milk. The powder cost 10 cents a pound. The grain ration consisted of four parts of corn, one of bran and one of linseed oil meal.

Type of Hog in Demand.

That the consuming public is taking a new trend as regards the character of hog carcass most in demand is pointed out by the sales representatives of the big packing companies. They are warning hog breeders to recognize this changed condition if they would produce animals that will bring the highest price on the market. Packers are buying today with an eye to the quality of the various cuts of the carcass. The heavy type of lard hog is losing out, largely due to the increased use of vegetable oils.

The grand champion carcass at the last International Livestock Exposition was a Berkshire which carried a much higher proportion of lean to fat than any other entry in the contest.

The lard hog is the result of carefully planned breeding. It should be just as easy, or easier, for the hog breeders to develop the leaner type now coming in demand. H. A. Phillips, in charge of the hog carcass sales department of Armour & Company, says:

"Certainly the feeder cannot put quality into the hog unless it is there to begin with. There are four factors on which quality is dependent. These are firmness of flesh, texture, intermingling of fat and lean, and flavor. The packer may have something to do with the flavor. The feeder can affect the firmness of flesh and the texture of lean and fat, but the degree to which they intermingle must depend absolutely upon the heritage the hog has to start with."

This is only one instance wherein the present and probable future preference and requirements of consumers need be studied. Farsighted farmers will be looking and planning ahead.

Testing Association Makes Good Report.

FEED, TEST, WEED, BREED, represent the ideas around which the Johnstown cow testing association is building its work. Four hundred and thirty-one cows were tested the month of September, their average butterfat production for the month being 27.6 pounds. Sixty-two cows produced an average of more than 40 pounds of butterfat for the month. The high-producing herd for the month was the Whowell & Polley herd, with an average milk production of 1,474 pounds and 46.52 pounds of butterfat. Crowley & Letford came second, with an average milk production of 1,232 pounds, and 41.7 pounds of butterfat. The cow with the highest production was Johanna Rue Wayne 3d, from the Whowell & Polley herd, her record being milk 3,147 pounds, and butterfat 92.2 pounds. Another Whowell & Polley cow, Johanna Pontiac Ragapple 2d, was second with a milk production of 2,385 pounds and butterfat, 84.2.

The following list of cows produced more than fifty pounds of butterfat for the month:

Owner of cow—	Lbs. Milk.	Lbs. Butterfat.
Conrad Giesick, R. H.	2,016	72.6
Whowell & Polley, R. H.	1,143	56.0
Whowell & Polley, R. H.	2,217	65.8
Whowell & Polley, R. H.	2,385	84.2
Whowell & Polley, R. H.	2,574	58.7
Whowell & Polley, R. H.	3,147	92.2
Whowell & Polley, R. H.	1,620	50.2
Whowell & Polley, R. H.	1,830	56.7
H. F. Sherman, G. H.	1,584	51.5
H. F. Sherman, G. H.	2,367	68.6
H. F. Sherman, G. H.	1,734	59.1
H. F. Sherman, G. Jer.	1,164	51.2
Wm. Gard, R. H.	1,674	55.2
Wm. Gard, R. H.	1,677	52.0
Krebeil & Van Meter, R. H.	2,019	57.9
Krebeil & Van Meter, R. H.	1,701	53.2
Krebeil & Van Meter, R. H.	2,001	54.0
Krebeil & Van Meter, R. H.	1,587	55.5
Crowley & Letford, R. H.	1,845	57.2
Crowley & Letford, R. H.	1,377	58.2
Reed Bros., R. H.	1,317	50.0
C. W. Henry, G. H.	1,563	62.5
C. W. Henry, G. H.	1,881	50.8
C. W. Henry, G. H.	1,602	52.9
C. W. Henry, R. H.	1,325	68.9
Fred Gossaint, G. H.	1,302	52.1
Weigand & Stewart, R. H.	1,831	50.8

Note—R. H. in table stands for Registered Holstein; G. H., Grade Holstein, and G. Jer., Grade Jersey.

Arthur J. Hunsader reports that members of this association have taken up the campaign against tuberculosis in earnest. Already C. W. Henry, Whowell & Polley, Crowley & Letford, S. A. Gray and Weigand & Stewart have signed up with the Federal Accredited Herd plan and from now on will have their herds regularly tested for tuberculosis.

Meditations of a Scrub Bull.

The following musings by J. E. Dorman of the Western Office of the Dairy Division, United States Department of Agriculture, were inspired by the nation-wide campaign to focus the public mind on the elimination of the scrub sire in livestock production:

"They call me a scrub bull; yet I have a pedigree. I was sired by a scrub, dam'd by a scrub, and am treated like a scrub, and I sometimes think that I am owned by a scrub. My tribe outnumbers purebred bulls four to one. Just why I should exist is a mystery even to me. Yet, I am not responsible for it. I was brought into the world without my consent and I shall probably leave it against my will. In the meantime I am getting the most vicious publicity, principally through the farm press. They say I am a renegade and an abomination, and should be exterminated. Dairymen passing my owner's farm look at me with contempt; even the cows show me no respect. My own daughters seen to hold a grudge against me, saying that I am responsible for their low production. I cannot argue the point, for it is true. But what can I do? My owner must think a lot of me personally, or he would not continue to support me, knowing that I can never improve the quality of his herd or be a source of profit to him. These cow testing associations are certainly showing me up, and I can see the handwriting on the wall. My tribe is doomed! Under the keen competition and low prices of good purebred bulls there will soon be no place on the farm for me. So, goodbye. I may be gone, but not forgotten, for I have retarded the development of the dairy industry for many years."

Girls Win as Dairy Cattle Judges.

The champion junior judge of dairy cattle in America is a girl, Miss Elizabeth Willerton of Ohio. She was the only girl to compete with the twenty-eight boys in the judging contest at the National Dairy Show and the boys admitted that chivalry had no part in the results of the contest. "I was reared on a dairy farm," said Elizabeth, "and know cattle as a city girl knows the streets of her town."

Feed Your Hogs MERRY WAR LYE

HOGS eat better when a little MERRY WAR LYE is mixed with their feed—and you know it takes appetite to make meat and fat. MERRY WAR LYE also tends to reduce acidity of feed—helps build up the resistance of hogs to certain diseases and helps tone them up. Thin, scrawny, sickly hogs usually improve quickly when fed MERRY WAR POWDERED LYE—even healthy hogs do better. Costs little to feed—120 feeds in every can—pays for itself many times over.

Directions For Feeding

Thoroughly dissolve a tablespoonful of MERRY WAR POWDERED LYE in a little water and mix well with feed for ten hogs or thoroughly dissolve HALF a can in water and mix with a barrel of feed. Stir well and feed night and morning. If on dry rations thoroughly dissolve HALF a can of MERRY WAR LYE in each barrel of drinking water. Follow directions carefully.

For years hog raisers have been feeding MERRY WAR LYE—they know what it will do. Profit by their experience—feed your hogs MERRY WAR LYE.

Look For The Picture of The Hog on The Label

It Is The Sign of Safety You will find it only on "MERRY WAR"—safe Lye for hogs.

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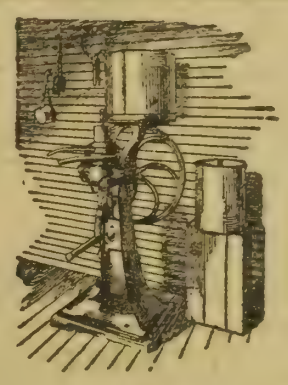

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The old De Laval Cream Separator shown above is owned by Mr. Geo. D. Caney of Richfield Springs, N. Y. It has been used every day for over twenty years and is still doing good work.

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The Belgian Melotte Separator—with the wonderful Self-Housing Bowl. No other like it.

30 days' free trial—then, if satisfied, only $7.50 and a few easy payments — AND — the wonderful Belgian Melotte Separator is YOURS.

No Money Down!

Catalog tells all—*write.*

Caution! U. S. Bulletin 203 shows that vibration of the bowl causes cream waste! The Melotte bowl is *self-balancing.* Positively cannot get out of balance therefore cannot vibrate. Can't remix cream with milk. *The Melotte has won 24 Grand and International Prizes.*

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Prevent this by using ABORNO. Easily administered by hypodermic syringe. Kills abortion germs quickly without harming cow. Write for booklet, letters from users and [illegible] of Money-Back Guarantee.

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Before churning add one-half teaspoonful to each gallon of cream and out of your churn comes butter of Golden June shade to bring you top prices. "Dandelion Butter Color" costs nothing because each ounce used adds ounce of weight to butter. Large bottles cost only 35c at drug or grocery stores. Purely vegetable, harmless, meets all State and National food laws. Used for 50 years by all large creameries. Doesn't color buttermilk. Tasteless. Wells & Richardson Co., Burlington, Vt.

Farmers' and Stockmens' Exchange

Advertisements will be inserted in this department for 7c per word; four or more consecutive insertions, 5c a word each insertion. Remittances can be made by postoffice money order or personal check. Every figure and initial counts as one word. Guaranteed circulation 55,000 copies each issue. Send us a trial advertisement. Write for proof showing how these columns pay advertisers.

HELP WANTED

RAILWAY MAIL, GOV'T CLERKS AND CARriers needed; steady work. Particulars of examinations free. Write Mokane, Dept. B-11, Denver, Colo.

EARN $110 TO $250 MONTHLY, EXPENSES paid, as Railway Traffic Inspector. Position guaranteed after three months' spare time study or money refunded. Excellent opportunities. Write for free Booklet G-142. Stand. Business Training Inst., Buffalo, N. Y.

AMBITIOUS MEN—WRITE TODAY FOR ATtractive proposition, selling subscriptions to America's most popular automobile and sportsman's magazines. Quick sales. Big profits. Pleasant work. Digest Publishing Co., 9659 Butler Bldg., Cincinnati, Ohio.

HUNDREDS U. S. GOVERNMENT POSITIONS continually open to men-women over 17; $92—$190 month. Quick, steady raise; paid vacation; no strikes; steady work; short hours. Common education sufficient, "pull" unnecessary. Write immediately for list positions. Franklin Institute, Dept. J 123, Rochester, N. Y.

FOLLOW THE DOLLARS—$50 TO $100 PER week, the money yours; something new, not an old, worn-out proposition; field untouched; experience unnecessary; takes everybody by storm; money rolls in; show 50, sell 40; demonstrated in one minute; sells on demonstration; the new Inkless Fountain Pen, the twentieth century wonder; never leaks or spills; with this pen no more use for the ink bottle; sample pen 50c; this proposition is 18 karat; money back if not as represented; agent's profit 200 per cent; exclusive territory; send for agency today. Inkless Fountain Pen Co., 1522 Eighth st., Des Moines, Ia.

FARMS AND RANCHES

CASH BUYERS WANT FARMS AND RANCHES for spring. May I sell yours? R. A. McNown, 334 Wilkinson Bldg., Omaha, Nebr.

SELL YOUR PROPERTY QUICKLY FOR CASH, no matter where located. Particulars free. Real Estate Salesman Co., Dept. 11, Lincoln, Neb.

WANTED—TO HEAR FROM OWNER HAVING farm for sale; give particulars and lowest price. John J. Black, 33rd St., Chippewa Falls, Wis.

WANTED—REAL DIRT FARMER, STOCKMAN with some stock. I have grazing ranch near Laramie, Wyo., plenty horses, some equipment, abundance stock water, trout streams, modern house. Fowler, 2555 W. 37th, Denver.

120-ACRE MISSOURI FARM, 365 FRUIT TREES, 5 cattle, 100 poultry; implements, season's crops included if taken soon; town handy; 85 acres fields, 15 cow pasture; about 500 cords wood, 50,000 ft. timber, orchard; attractive cottage, barn, poultry house. Owner called away, $3,000 takes all, part cash. Details page 86 Illus. Catalog 1200 Bargains, Copy Free. Strout Farm Agency, 831 BA, New York Life Bldg., Kansas City, Mo.

320 ACRES ON PLATTE RIVER, GOOD BUILDings; easy terms; cows, hogs, poultry, corn, etc., bring in good income here; splendid duck shooting; near R. R. town, city markets; 100 acres loamy fields, balance pasture with 3-strand wire fences; good 6-room house, ample water, porch, bathroom, excellent shade; 40-foot barn, granary, bunk house, corn crib, 2 hay corrals, piggeries; called away, $21 an acre gets it, part cash. W. R. Packer, Goodrich, Colo.

LIVE STOCK

CATTLE.

RANGE BULLS—REGISTERED HEREFORDS and Shorthorns. The Lowell Purebred Cattle Co., Union Stock Yards, Denver.

WHY PAY MORE? PUREBRED REGISTERED Holstein heifer calves, $50. Circulars free. Condon's Holstein Parks, West Chester, Ohio.

FOR SALE—TWENTY HEAD OF HIGH-GRADE Milking Shorthorn cows, bred to and sired by registered bulls. Also one 2-year-old registered Milking Shorthorn bull. V. T. Wyatt, Sedalia, Colo.

THREE REGISTERED HOLSTEIN BULL CALVES —this spring's calves, from cow with 30 lbs. butter 7 days, and over 100 pounds milk per day. Fine individuals, priced reasonable. Write for information. Phone Englewood 298 R 11. James Gibson, Mt. Morrison, Colo.

FOR SALE—FIVE MONTHS-OLD PURE AND well bred Holstein Friesian bull calf; from a 40-pound bull and a real cow. See calf and dam at Fairhill Farm, South Federal Blvd. Entrance just north Loretto Academy. Phone Eng. 151. W. F. Norris, Route 6, Box 117, Denver, Colo.

HOGS.

BIG TYPE POLAND CHINAS, BOTH SEXES, ALL ages. Write for prices and breeding. Gad Barney, Haswell, Colo.

FIRST CLASS REGISTERED HAMPSHIRES, Poland Chinas, and Chester Whites, boars and gilts; also White Wyandottes. Dyke Smith, Fleming, Colo.

BLUE HOGS—ACTUALLY BLUE IN COLOR; large, growthy and prolific, fancy show hog; all stock pedigreed, registered in purchaser's name. Blue Hog Breeding Co., Wilmington, Mass.

SHEEP.

RAISE KARAKUL SHEEP, PRODUCING PERsian Lamb Astrakhan fur. Two lambings yearly. Bear Creek Investment Co., Rolf Schroeder, 1545 Welton St., Denver, Colo.

MILCH GOATS.

SWISS MILCH GOATS, HIGH GRADE STOCK; milking from three to five quarts; also young stock. Frank Rowlins, R. D., Edgewater, Colo.

PET STOCK

TRAINED COLLIES AND ENGLISH SHEPHERDS [illegible] M. Lowe, Manor, Neb.

POULTRY

PLYMOUTH ROCKS.

BARRED ROCK COCKERELS, FISHEL STRAIN, $5 to $20. Beaty's Poultry Farm, Rocky Ford, Colo.

RHODE ISLAND REDS.

ROSE-COMB RHODE ISLAND RED COCKERELS —exhibition stock, $3, $5, $7. Mrs. B. Dougherty, Norwich, Iowa.

S. C. RHODE ISLAND RED COCKERELS FOR sale, from the winning pens at the Northern Colorado poultry shows. Ben Scranton strain; price $3 and $5. Simon Hill, Evans, Colo.

WYANDOTTES.

WHITE WYANDOTTE COCKERELS, TRAPnested. Mrs. Mary M. Wright, Rt. 2, Box 314, Boulder, Colo.

WHITE WYANDOTTE COCKERELS AND PULlets; show stock at two cockerels for $5, three pullets for $5. Mrs. B. Dougherty, Norwich, Iowa.

WHITE WYANDOTTES, GREAT BARGAINS— Hens, pullets, cockerels, cocks; excellent breeders; prize winners. Richard Matoush, Julesburg, Colo.

ANCONAS.

ANCONA COCKERELS—WE ARE MAKING A specialty of cockerels during the month of November. Big husky dark fellows, with yellow legs; bred from our heaviest layers, and sure to satisfy. Order early and get first choice, $5 each, or $4 each in lots of five or more. Don't risk getting inferior stock elsewhere, but come to Ancona headquarters and get the best in the west. Great Western Poultry Farm, Jas. A. Clevenger, Manager, Rocky Ford, Colo.

ORPINGTONS.

BUFF ORPINGTONS—BUY YOUR COCKERELS now and save half; $2 to $5 each. C. H. Drage, 675 W. 3rd St., Loveland, Colo.

LEGHORNS.

WHITE LEGHORN PULLETS AND HENS, $1 each. Ernest Lawton, Boone, Colo.

SEVERAL VARIETIES.

NINETY BREEDS—POULTRY, EGGS, PIGEONS, dogs, baby chicks, parrots, ferrets, hares. Complete free folder. Bergey's Poultry Farm, Telford, Pa.

IF IT WEARS FEATHERS WE HAVE IT OR will get it for you. Headquarters for pullets and cockerels. Have on hand classy lot of Barred Rock and Ancona pullets. Oat sprouters to get you winter eggs. Write or phone. Champney's Poultry Yards, 2057 S. Broadway, Denver, Colo.

SEEDS

99.50% PURE ALFALFA SEED, $16.50 HUNdred, germination almost 100%. Red Clover, $18; Sweet Clover, $8.50; Timothy, $5.50; Grimm alfalfa, $30. Meier Seed Company, Salina, Kan.

LUMBER

FIR LUMBER, MILLWORK, RED CEDAR SHINgles, fence posts, from mills to you. Send bill for delivered prices. Lansdown, Box 909M, Everett, Wash.

MISCELLANEOUS

INVENTIONS WANTED—CASH OR ROYALTY for ideas. Adam Fisher Mfg. Co., 204, St. Louis, Mo.

ITALIAN PRUNES, FANCY EVAPORATED LOganberries; unusual low price. Harry Lanum, Rt. 4, Salem, Ore.

BEST PARCHMENT BUTTER WRAPPERS, 8x11, neatly printed, 100, 60c; additional 100, 40c. Home Specialty Co., Middleton, Idaho.

CABBAGE AND VEGETABLE CUTTER—SIX knives, prepaid, $1; three for $2. One free to secretary Ladies' Aids. Lusher Bros., Elkhart, Ind.

FORD OWNER—YOUR CYLINDERS OIL UP? Spark plugs quit firing? Stop it. Send $1 for information. Cofer Bureau, 30 Second Avenue, Long Branch, N. J.

SCENARIOS WANTED—DIRECT STUDIO SERvice; membership now open to talented amateurs. Address Sec. American Screenwriters' Society, 5821 Santa Monica Blvd., Hollywood, Calif.

SEND FOR OUR WHOLESALE WEEKLY PRICE lists; it will keep you posted on the rock-bottom prices, and will help you save from 25 to 40 per cent on your supplies. Stock Growers Wholesale Supply Co., 1523 19th St., P. O. Box 1442, Denver, Colo.

PATENTS—BOOKLET FREE. HIGHEST REFerences. Best results. Promptness assured. Send model or drawing for examination and opinion. Watson E. Coleman, Patent Attorney, 624 F St., Washington, D. C.

LET US TAN YOUR HIDE—COW AND HORSE hides for fur coats and robes. Cow and steer hides into harness or sole leather. Catalog on request. We repair and remodel worn furs; estimates furnished. The Crosby Frisian Fur Co., Rochester, N. Y.

NOW IS THE TIME TO ENTER BUSINESS— Our position calls have increased 50 per cent over last year. Write for 56-page catalog, mailed free. Barnes Commercial School, 1625-45 Champa St., Denver. Largest business school in Rocky Mountain region. Begin at any time.

AUTOMOTIVE TRADES TAUGHT—DENVER INstitute of Technology guarantees satisfaction teaching following trades: Automobile and tractor repair, automotive electricity, storage batteries, welding, vulcanizing; 15 years' experience. Write for booklets. Y. M. C. A., Denver.

NURSES TRAINING SCHOOL—PARK AVE. HOSpital, Denver, Colo., offers a thorough training to young women desirous of becoming professional nurses. This is a fully accredited school. Course is three years. During training students receive full maintenance, tuition and all uniforms; also money allowance of $6 per month to cover other hospital needs. Apply Supt. of Nurses, Park Ave. and Humboldt Sts., Denver, Colo.

HONEY.

"THEBESTO ROCKY MOUNTAIN HONEY," none better; satisfaction guaranteed or money back; five pound can, postpaid $1.50. Send remittance with order. Write for price on large quantities. The Colorado Honey Producers Association, Denver, Colo.

LIVESTOCK NOTES.

The second annual sale at the Bonvue Farms at Golden, October 14, was attender by a large crowd of Shorthorn buyers and they had a chance to buy some of the best Milking Shorthorns in the West. The top of the sale was $400 for Rose of Sharon, going to Otto Ramstetter of Golden. Some of the buyers were J. B. Benedict, O. E. Huff of Tacony, J. A. Goodier of Wildhorse, W. A. Dickens of Longmont, H. C. Card of Haswell, Mr. Paddleford of the State Home at Golden. Twenty-five head of the Bonvue cattle averaged $219. C. W. Snook of Greeley and Buchanan & Henry of Denver conducted the sale.

On Monday, November 20, Hall Brothers at their Western Holstein Farm, five and one-half miles southwest of Denver on the Mount Morrison road, will offer at public auction their herd of Holstein-Friesian cattle, consisting of sixty-five females. This herd of females consists of daughters of Western Ascalon Colantha Boy No. 116247; Western Colantha Sir Top No. 313333, and Sir Johanna De Colantha Ormsby No. 192531. See special announcement of sale in this issue.

The Smith Livestock Company of Chivington, Colo., will offer at public auction at Lamar, Colo., November 21, forty head of Polled Herefords of the most excellent breeding. Catalog and full particulars can be secured by writing the Smith Livestock Company, Chivington, Colo. Catalogs are now ready.

One of the big Holstein events of the year will be the Whowell & Polley sale at Johnstown, Colo., November 22. Eighty head will be sold, among which are thirty-five A. R. O. cows and a choice lot of young heifers. See announcement in this issue.

Elbert county breeders held their fifth semi-annual sale at Elbert on October 18, and if anyone doubts that good cattle don't draw a crowd, just go to their next sale at Elbert. The buyers were from all parts of the state. Some good bulls sold up to $150, and were worth the money. Some very useful females went through the ring. A banquet was held at Elbert the night before the sale and was attended by a good crowd of breeders. They have a fine pavilion to sell in and all take a great interest in the organization. Just watch this association succeed.

TRAPPERS' POISON.

GOES' LIQUID POISON CAPSULES KILL FUR animals on the spot; seventeenth season in use with excellent results. I send free circulars. Mention this paper. Edmund Goes, Milwaukee, Wis. Station C.

TOBACCO.

FREE TOBACCO—WRITE FOR SAMPLE OF Kentucky's best smoking tobacco. Hawesville Tobacco Co., Hawesville, Ky.

NATURAL LEAF TOBACCO—CHEWING, 5 LBS. $1.75; 10 lbs., $3. Smoking, 5 lbs., $1.25; 20 lbs., $3.50. Send no money. Pay when received. Tobacco Growers' Union, Paducah, Ky.

HOMESPUN TOBACCO—CHEWING, 5 POUNDS, $1.75; 10 pounds, $3; 20 pounds, $5. Smoking, 5 pounds, $1.25; 10 pounds, $2.00; 20 pounds, $3.50. Send no money, pay when received. Co-Operative Tobacco Growers, Paducah, Kentucky.

TOBACCO — THREE-YEAR-OLD KENTUCKY leaf; pay for tobacco and postage when received; 3 lbs. chewing, $1; 4 lbs. smoking, $1; 7 lbs. No. 2 smoking, $1. Kentucky Tobacco Assn., Hawesville, Ky.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24TH 1912, OF "WESTERN FARM LIFE," PUBLISHED SEMI-MONTHLY AT DENVER, COLO. FOR OCTOBER 1st, 1922.—State of Colorado, County of Denver. Before me, a notary public in and for this state and county aforesaid, personally appeared W. S. Edmiston, who, having been duly sworn according to law, deposes and says that he is the publisher of the Western Farm Life, and that the following is to, the best of his knowledge and belief a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to-wit:

1. That the names and addresses of the publisher, editor, managing editor and business manager, are:

Name of publisher—W. S. Edmiston, Denver, Colo. Editor—W. S. Edmiston. Managing Editor—Geo. C. Wheeler, Denver, Colo. Business Manager—H. C. Hardison, Denver, Colo. 2. That the owners are:

The Farm Life Publishing Co., Denver, Colo.
W. S. Edmiston, Denver, Colo.
H. C. Hardison, Denver, Colo.

3. That the known bondholders, mortgagees and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages or other securities are: Mergenthaler Linotype Co., New York City, N. Y. F. W. Hazard, Denver, Colo. C. B. Cottrell & Sons Co., Westerly, Rhode Island.

4. That the two paragraphs next above giving the names of the owners, stockholders and security holders, if any, contains not only the list of stockholders and security holders as they appear upon the books of the company, but also in cases where the stockholders or security holder appears upon the books of the company, as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association or corporation has any interest, direct or indirect, in the said stock, bonds or other securities than as so stated by him.

W. S. EDMISTON,
Publisher.

Sworn to and subscribed before me this 11th day of October, 1922.

ALICE B. HIGGINS,
Notary Public.

(My commission expires Jan. 19, 1924.)

Morgan County Shorthorns Sell Well.

The appreciation of Colorado farmers on non-irrigated land for Shorthorn cattle was well demonstrated last week at the first annual production sale of the Stewart-Wylie Stock Farm at Wiggins, Colo. In spite of a poor crop due to drought and hail, the farmers of Morgan county came forward and took up the offering of yearling heifers and bulls at prices in line with present conditions, but still sufficient to show the appreciation of good cattle.

An aged cow with calf at side was perhaps one of the best bargains of the day when she sold at $127. A number of 10 to 14-months-old heifer calves brought over $100 a piece, while two young bulls brought $100 each.

All the calves and yearlings were sired by Scottish Dale, by Dale Clarion by Double Dale, a very excellent bull that heads the Stewart herd. The buyers were: Cecil and George Osborn, Frank Vetts and R. B. Middlesworth, all of Wiggins; John Lewis and A. A. Tryon, of Hoyt; M. Osborn of Orchard; Geo. Chapman, Dave Buzich, W. A. Sargeant & Son and Joe Tarr, all of Fort Morgan.

"It pleases me very much to have all the cattle stay in Morgan county, and they all went into good hands," said Mr. Stewart. "It is my aim to introduce some new blood into the herd in the near future and to continue to supply our community with the best Shorthorns."

The sale was conducted by Col. R. D. Langford of Wiggins, and Dennis & Madsen of Fort Morgan.

—C. N. Henry, Fieldman.

Poultry Association Plans Big Show.

A real big poultry show and poultry school will be conducted by the Fremont Poultry Association in Canon City, Colo., December 4 to 9.

The main street will be all lighted up and every farmer in Fremont county who has a purebred flock of poultry will be there with his exhibit. Lectures on the feeding and management of poultry will be given each day by experienced poultrymen.

Fully 40 per cent of the farmers in Fremont valley depend upon poultry, to a large extent, for their living. They have built up a wonderful organization. Through their trust in co-operation they have been selling thirty cases of eggs a week through the farm bureau office. They have raised money to construct the poultry plant which will be used by the Colorado Agricultural College for its official International Egg-Laying Contest which will open November 1, 1923.

Everybody is back of the Fremont county association in its effort to improve the poultry industry of Colorado.

DISPERSION SALE

POLLED HEREFORDS

LAMAR, COLO., NOVEMBER 21, 1922

WE WILL OFFER AT PUBLIC AUCTION 40 HEAD OF OUR POLLED HEREFORDS, CONSISTING OF BOTH MALES AND FEMALES.

Cows are from Polled Plato and our herd bull is Polled Success A 3rd. Write us for Sale Catalogue and full particulars of this offering of choice Polled Herefords.

THE SMITH LIVESTOCK CO.,
CHIVINGTON, COLORADO

BLUE RIBBON HERD

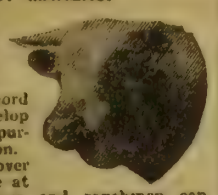
DUROCS

Buy them young and grow them yourself. Weaned pigs, regular price $25 to $50. Our specialty for short time on good farmers' boars, weaners, $15 and $20. Show prospects, weaners, $50. Are breeding now for fall farrow. Can sell you one or a carload. Our Blue Ribbon herd was the high winner at Denver. Write today.

The Blue Ribbon Live Stock Co.
C. F. Burke, Mgr. PUEBLO, COLO.

Shorthorns That Milk

ARE MONEY MAKERS.



A herd that will give you a good monthly cash income is what you will need in the future. One of our young bulls from a Record of Merit cow can develop your herd into a dual-purpose paying proposition.

We know the war is over and have bulls for sale at prices that you farmers and ranchmen can afford to buy. Write for our bargain list and easy payment plan.

We also have several young bulls for sale, priced to sell.

THE PINE VALLEY DAIRY & FARMS CO.

Seeley G. Rose, Mgr. Colorado Springs, Colo.

OUTSTANDING HOLSTEIN BULL

We have for sale a yearling son of a three-year-old heifer who made 1,035 lbs. butter last year and 21,428 lbs. milk, making her fifth in the world for butter production and ninth for milk for the year 1921-1922. The bull calf is sired by a 30-lb. son of Johan Duchess De Kol Lad, a bull who has two world record sisters, and two world record daughters. Calf is mostly white and a beautiful individual.

WRITE FOR PRICE.
WHICH IS REASONABLE.

Mrs. R. G. Douglas, Rush, Colo.

PRODUCTION

TYPE

We offer you a wonderful amount of these Holstein qualities—and from a clean herd. Bull calves from fine record dams. Pahgre Valley Ranch, Loesch Bros., Montrose, Colo.

SIZE

BREEDING

Buy a Calf Out of This Herd

Twenty cows in this herd on an official seven-day test averaged 446.13 lbs. of milk and 20.19 lbs. of butter.

COLORADO STATE HOME,

2305 S. Wash. St. Denver, Colo.

Milking Shorthorn Grades Heifers and Young Cows

Reds and roans. Heavy in calf, and Springers. Especially selected from good herds. One or a carload, priced reasonably, quality considered.

C. H. HINMAN,

STOCKYARDS, DENVER, COLO.

Bates Shorthorns

are the foundation blood of true Milking Shorthorns. We have them. A few bulls for sale.

THE CARPENTER CATTLE CO.

GREELEY, COLORADO

Buy MILKING SHORTHORNS

from the oldest established herd in the state. We can supply your needs in bulls of beef type either horned or polled Shorthorns.

Write Superintendent for folder on breeding and prices.

State Industrial School,

Golden, Colo.

We have bred hundreds of prize-winning and high-producing Holstein cows, including

Tilly Alcartra

We can supply you with that same line of breeding. Write

McKAY BROS., Caddoa, Colo.

GREAT BARGAINS, 960 HEAD HEREFORDS, SHORTHORNS, ABERDEEN ANGUS 1, 2, 3, 4 and 5 years old. Cows, heifers and bulls. Prices $75 to $120 and up. 360 Percheron and Belgian horses, stallions, mares and colts, 1 to 6 years old. Prices $125 and up per head. One head or a carlot. Breeding guarantees with each. Registered pedigrees by mail. Stock on twenty farms in Iowa and Illinois. Write for circular and particulars. Address ILLINOIS HORSE & CATTLE CO., Good Block, Des Moines, Iowa.

BUCHANAN & HENRY,
LIVESTOCK
AUCTIONEERS

1927 Broadway Denver, Colo.

Write us, or Phone Champa 4655.

HALL BROS., Denver, Colo.

ANNOUNCE THEIR COMPLETE DISPERSAL

Sale of Holstein-Friesian Cattle

to be held at the

WESTERN HOLSTEIN FARM

FIVE AND ONE-HALF MILES SOUTHWEST OF DENVER
ON THE MORRISON ROAD

Monday, November 20, 1922

THIS HERD OF SIXTY-FIVE FEMALES ARE MOSTLY UNDER FIVE YEARS OF AGE AND HAVE ALL THEIR POSSIBILITIES BEFORE THEM

They include twenty-six daughters of Western Ascalon Colantha Boy No. 116247—a son of Colorado's only 1263-lbs. butter cow, Dutchland Hengerveld Ascalon. He also combines the blood of some of the greatest sires of the breed.

Also ten daughters of Western Colantha Sir Top No. 313333—a grandson of Dutchland Hengerveld Ascalon. This bull was Junior Champion at the 1921 Western National Stock Show, and the best individual ever sold from Colorado.

And thirteen daughters of Sir Johanna De Colantha Ormsby No. 192531—a grandson of Sir Pietertje Ormsby Mercedes with twelve daughters making records of over 1,000 pounds of butter in one year.

These cows are undoubtedly capable of making good records if given a chance, but no testing has been done on the Western Holstein Farm for the past two years.

THIS HERD WILL BE TUBERCULOSIS TESTED BEFORE THE SALE.

This was one of the first herds to be tested for tuberculosis and has always been kept clean of same.

IF INTERESTED, DROP A POSTAL TODAY FOR CATALOGUE.

Address all mail to

HALL BROS., South Denver Station, Denver, Colo.

BUCHANAN, HENRY & BANKS, Auctioneers. C. N. HENRY, Fieldman for Western Farm Life.

Agricultural College Offerings

Shorthorn Bulls

For Sale—by Snow King and Lord Douglas.

Some good Bred Sows

in Poland Chinas and Duroc Jerseys.

Shropshires, Hampshires and Rambouillet

ram lambs.

Write us for full particulars, prices.

Colo. Agricultural College

FORT COLLINS, COLO.

Brauer Purebred Duroc Co.

Colorado Springs, Colo.

The greatest individual lot of spring boars at moderate prices, to close out early. Now is your time to buy.

Write for full particulars, etc.

J. W. BRAUER, Gen. Mgr.

22 Lorraine St. Colorado Springs, Colo.

HAMPSHIRE HOGS

We make a specialty of furnishing foundation herds. Show and Herd Boar prospects that combine the blood of the greatest show hogs ever produced. Lookouts, Wickwares and Tiptons. For free booklet etc., write N. E. MOSHER & SON, Hugo, Colo.

SPRING BOARS

Just a few real herd headers left ready to go at pre-war prices. Used with grade sows even, they will more than pay for themselves on the first crop of pigs. Write today.

C. C. Boyd, Yuma, Colo.

Livestock Auctioneer and Duroc Breeder.

Mather's Big-Type Polands

sold to breeders in four states this year are giving satisfaction.

CHOICE YOUNG BOARS

at prices that will surprise you.

C. J. Mather, Longmont, Colo.

Whowell & Polley Sale, Johnstown, Colo.

Complete Dispersal Sale

— of —

Holstein-Friesian Cattle

To be held at Johnstown, Colo.,

November 22, 1922

THIS IS PROBABLY THE BEST HERD IN THE STATE OF COLORADO AND WILL BE ONE OF THE LARGEST SALES IN THE WEST This Year

This herd is one of the highest producing herds in the fourteen western states doing association work. We have been testing for the past two years and have made some very good records, as our catalogue will show, cows going as high as 32½ lbs. for seven days; and 1,000 lbs. for 365 days; 20,000 lbs. milk for 305 days, etc.

We aim that this herd of some 80 head shall be sold in the best working condition possible. Every animal must sell.

There will be some 8 or 10 head of good bulls from cows making 20 to 32½ lbs. butter in seven days.

Senior Sire, JOHANNA FAYNE LONGFIELD KORNDYKE, No. 254416.
Junior Sire, SIR JOHANNA DE COLANTHA FAVORITE.

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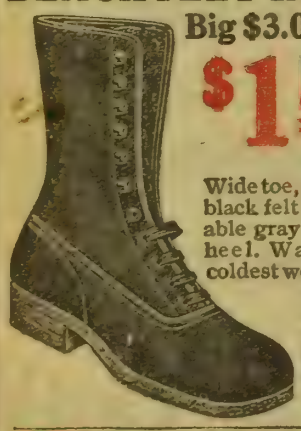

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The Only Agricultural Magazine Published in Colorado

WESTERN Farm Life

DENVER

Vol. XXIV. No. 22

November 15, 1922

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25,000 BARGAINS

THE closing of our great Denver Warehouse, in order to enlarge our manufacturing laboratories has forced us to dispose of part of our heavy Christmas shipments AT ONCE.

It affords YOU an opportunity to secure standard advertised goods, in Christmas packings, at prices never offered before.

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Scores of suggestions below on standard goods well known to you — at substantial savings. Special inducements to early shoppers (see below). Cash or C. O. D. We prepay Parcel Post charges.

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Hudnuts Twin Compacts, **$1.50**, truly delightful and **very new.** Refills 50c.

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Mai D'Or Flacon of perfume **free** with above. All orders dated up to Dec. 5th.

$1.00 Mai D'Or Compactes (large size), **89c.**

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Pair of genuine white bristle 11-row military brushes; genuine ebony backs; reg. $4.00. Xmas special....**$2.87**

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Gainsborough **true to colors.** Specify color wanted.
Single mesh **10c**
Double mesh, 2 for **25c**

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4-oz. tin—Powder or Cones, **47c.** In pine, sandalwood, wisteria, violet, lotus and rose odors. For the Christmas season.

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Green and black.....**$15.00**
Mahogany finish **$16.50**

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No. 2A Brownie (2½x4¼).....**$3.50**
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And others up to **$100.00**
Send for new free Kodak Catalog.

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Our book department will select any new book you want at 9 cents under regular price. Selection 12 Xmas cards, 4—5c, 4—10c, 4—25c, value $1.60. Special, **$1.00 for 12.**

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The famous social stationery advertised in all leading magazines. If in doubt, give stationery —the "Write Gift."

For Xmas we are featuring the **now very popular** Gentlemen's size in Gray Court Melton. **Very** popular with **Women** too—the new gray tone. Gentlemen's or ladies' size, our price, 87c.

FREE! With every $5.00 purchase of merchandise from this page we will give—FREE—a No. 5400 Box of White Hammermill Bond Social Stationery.

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Ounce **$2.37**
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L'Origan **2.59**

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Coty's, Chypre, Jasmin de Corse, L'Or, L'Origan **$3.79**
L'Effleurt **4.28**
L'Origan, large..... **5.72**
Oeillet, Rose Jacquem-inot, Violette.....**$0.64**

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Original Bottles.
Ideal, small **$3.34**
Large **$6.43**
Quelque Fleurs.....**$3.79**
Quelque Voilette..**$4.28**
Coeur de Jeanette **$5.23**

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Coeur de Jeanette **$4.74**
Ideal, 4-oz..... .....**$3.09**
8½-oz. **$5.69**
Quelque Fleurs—
Small.... .....**$3.34**
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$3.50 Mavis Toilet Set, our price **$2.87**, contains perfume, toilet water, face powder and talcum.

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Oz. bottles **$1.69**
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In Azurea, Floramye and LeTrefle.

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Violet Sec, Gardenia, Rose of Omar, Sandalwood, Sweet Orchid, White Lilac, Yankee Clover—
Small **$1.00**
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Original bottles,
Three Flowers—very distinctive.**$1.00**
Du Barry.
White Heliotrope.
Soul of the Violet.

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Apple Blossom, Locust Sweets, Rose Leaves, White Rose and Wisteria, per oz.....**50c**
Garden Glo, oz.....**$2.00**

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In attractive Christmas boxes.
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$1.00 Eveready Safety Razor.....**89c**
(Both in new style cases.)

$8.50 Auto Strop Safety Razor Set, in good looking leather traveling case. Contains Rubberset shaving brush, soap, strop and $5.00 silver-plated razor—our big Xmas Special **$4.87**

$7.50 Gillette, leather case, contains Rubberset shaving brush, soap, $5.00 silver-plated razor—our price.....**$4.37**

Gillette Blades, **73c doz.**
Autostrop Blades, **6s, 39c.**
Everready Blades, **34c.**

$5.00 Twinplex Stropper.....**$4.76**
and ½ doz. Gillette blades **free** on all orders dated up to Dec. 5. Puts perfect edge on Gillette blades. Very popular.

Rubberset Shaving Brushes, $1.50 to $7.50.

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Pick the kind you want from magazine advertisements

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Nickel-plated **$1.00**
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Sheaffer's Life-Time Pens, guaranteed 25 years, **positively** the best.....**$8.00**
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Throws light 300 feet—very acceptable....**$3.25**

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Western Farm Life

A Western Magazine for Western Farmers and Stockmen

VOL. XXIV. DENVER, COLORADO, NOVEMBER 15, 1922. No. 22.

Cow, Sow and Hen Save the Day When Crops Fail

PLAINS COMMUNITY GOING INTO SHORTHORNS OF MILKING TYPE

By George C. Wheeler.

IT IS most refreshing to find a group of farmers with a reasonably optimistic outlook under conditions prevailing in many sections this year. There have been large areas in which disastrous hail storms destroyed all growing crops early in the season. In some instances a second hail struck sections in which attempts were being made to recover from the earlier destruction. Less than the normal rainfall meant poor crops in many cases, and then to cap it all, marketing conditions have been most unsatisfactory. With store bills to pay, mortgages and interest coming due, taxes, that never-failing obligation which comes as inexorably as death itself, to be met, it is not to be wondered that there should be some "bear talk," as the football enthusiasts call it, among farmers who are up against all these discouraging conditions.

In a recent day's drive in the eastern part of Adams and Arapahoe counties, however, I found a minimum of discouragement among the farmers visited. None were claiming any big profits from the year's operations, in fact, few were claiming any profits at all, but the general attitude of mind seemed to be that it was a period of marking time, relying on the fact that agriculture is the fundamental industry of this country and that other lines of business must eventually recognize the key position the farmer holds and co-operate in a program which will put him on a par with other lines of production and service. There are many indications that the public generally is waking up to a realization that other lines of industry cannot be prosperous while agriculture continues in the lame-duck class. These thoughts seem to be running in the minds of many of the farmers visited and buoyed up their faith in the farming business.

One-Crop Farming Risky.

The development of a new and more sympathetic attitude toward agriculture, and the response in high places to its claim for relief, is without doubt partly responsible for the small measure of optimism displayed by thinking, forward-looking farmers. Among the farmers I visited, however, on this particular trip the most important contributing factor to the forward-looking, hopeful frame of mind in which I found these men, was that they were looking to the cow, the sow and the hen, to save them from the serious financial embarrassments which are harassing so many one-crop farmers. This is not meant as an unfriendly arraignment of those who from necessity or otherwise are following the one-crop system of farming. It is merely an attempt to point out what is happening all through the plains regions.

One-crop farming is too risky and in almost any section of the plains area proof of this statement can be found. In driving through the country farms here and there will be pointed out where financial ruin came as a result of putting out all the land that could be scratched over into wheat to the exclusion of every other crop, or perhaps it was beans. On such farms will be seen farm equipment representing hundreds of dollars of investment now standing idle and rapidly becoming valueless by the rust and exposure route. On the other hand, here and there through the same areas will be found families that have stuck and established themselves in comfortable homes, and the why of it is almost invariably due to the fact that they milk a few cows, kept a flock of hens, and at least enough hogs to produce their home meat supply. The cream checks and the returns from the eggs and poultry have furnished a regular revenue despite unfavorable crop conditions and the home food supply has been assured. Even in the worst crop years those who plan carefully manage to raise some feed which can be converted into cash by the cow, sow or hen. It is from farmers who have adopted this policy of diversified farming, depending on the livestock production to tide them over the bad crop years, that the least complaint is coming in the present period of adjustment through which we are passing—a period in which farming is being particularly hard hit.

Community Developing Interest in Milking Shorthorns.

Developing a community in which Shorthorn cattle, and to a considerable extent the Milking Shorthorns will predominate, has aroused the imagination of a group of farmers committed to the diversified farming program in the territory around Bennett and Strasburg. This is typical plains farming country, the valley of Kiowa creek, which is a dry stream most of the year, furnishing a little alfalfa land for those fortunate enough to own some of the creek bottom. Shorthorns are the cattle most in favor even on farms where grades only are kept. In company with H. W. Hailey, who is Shorthorn fieldman, representing the American Shorthorn Breeders' Association, and the State Shorthorn Association, I spent a day visiting and interviewing the farmers of this section who are endeavoring to establish good Shorthorn herds upon their farms. The tendency towards milk is quite marked. Conditions are somewhat different from those found in sections where the production of beef is the primary purpose for which cattle are kept. In this type of farming some steady source of income is necessary. The demand for cattle of the type that will fit into plains farming is spreading to the east through the plains region and the men in the Bennet community can count on an outlet for good purebred breeding stock as they come to have surplus animals to sell from their herds.

Cows and Hogs Go Together.

On the creek with farming land running back to the upland, C. E. Eddleblute already has a bunch of good cows of the Milking Shorthorn type, among them four Imperial Clay cows. These cows are turning good silage and alfalfa into milk and cream and a likely lot of youngsters were in evidence, including a baby bull calf having the making of a herd bull for someone. Mr. Eddleblute was in the field half a mile from the house tuning up a tractor preparatory to drilling in wheat on the corn stubble land from which his silo had been filled. He remarked that it was late to put in wheat, but that the men who drilled their wheat early were no farther ahead, for the seed still lay in the dry soil. Mr. Eddleblute did not seem to center his hope for the year ahead around the wheat, however, for he realizes the uncertainty of wheat as an every year crop. He is using a bull of Bates breeding to head his herd, an animal well bred along milking lines and carrying a good measure of beef possibilities, although somewhat lacking in scale.

An excellent bunch of Duroc Jersey hogs, brood sows and fall pigs, were cleaning up their corn in the fieldlot. This herd of purebred hogs is being looked to in that community more and more as a source of seed stock. From a slight preference for Poland China hogs the drift is now towards the Durocs, largely because this herd is being bred and developed according to high standards in pork production. As one man remarked: "I used to favor Polands, but a good hog is not restricted by color and I expect to get into the red hogs just because this well-bred herd is located in the community, making it easy and economical to get breeding animals."

Big Return From Four Foundation Animals.

The most enthusiastic Shorthorn man in the community, perhaps, is Fred Haupert, although ill health and lack of help compelled him to make a sale last year and dispose of a considerable portion of his herd. He still retains some foundation animals and is hoping to again build up a herd of milk-producing Shorthorns. The story of how he obtained the foundation animals is an outstanding object lesson in the possibilities of founding a herd of high class cattle from a very moderate investment.

Knowing that there were numerous herds of Shorthorns of good type and breeding in eastern Nebraska, Mr. Haupert went to York and from Jas. Barr, a man who made no specialty of breeding fancy Shorthorns, but just breed real, good cattle, he bought four females, two of them but calves. These four animals cost $425. This was in 1918, when prices were at the high peak. When it became necessary to reduce stock, Mr. Haupert put on a well-worked-out advertising campaign, although not an extravagant one. He got together a good bunch of buyers and sold more than $700 worth of stock directly descended from these four females, and on the basis of the prices they brought had $600 worth left. In one respect Mr. Haupert was fortunate. As he expressed it: "I just had a streak of pure 'bull' luck and had a run of heifer calves." This sounds like an Irish bull, but this run of heifers made it possible to build up the herd very rapidly. The present females are of good type and all Mr. Haupert needs is the right kind of a herd bull. He is breeding some of his cows to Mr. Eddleblute's bull.

What we saw and learned at Haupert's place was not the whole story of the Nebraska purchase. Mr. Haupert had been commissioned to buy two mature cows for a neighbor, Sam Wasson, another ardent Shorthorn admirer. In making his selections he asked to see the mothers of the calves he had bought for himself and was so much impressed with the kind of calf one of these cows had produced that he purchased the mother on the strength of the calf, although she was rather common looking at the time, largely owing to the fact that she was such a good milker and was thin in flesh. At Mr. Wasson's place we saw this cow, Buelah, and her eleventh calf, a great husky bull seven months old with plenty of breeding character and individual excellence, a good herd bull prospect for someone. Buelah had produced seven calves for her former owner in Nebraska. Her grand - daughter also belongs to Mr. Wasson, having been purchased at the Haupert sale. She also had a calf of outstanding quality. These calves were sired by a

Group of prize-winning Milking Shorthorns shown at National Western Stock Show.

(Turn to Page 14)

Easy to Study Moisture Conditions of the Soil

PLAINS FARMER SHOULD KNOW AMOUNT OF RESERVE WATER AVAILABLE

E. R. Parsons.

A LECTURER on agricultural subjects made the statement in my presence that when the precipitation had entered the soil he did not know anything about its subsequent movements and did not believe anyone else did. This man was evidently an indifferent observer, and credited everyone else with being in the same class. The men who make a success of life, whether it be in farming or business, are those who know the industry they are engaged in from the inside to the outside and from top to bottom, and even then there is always more to learn.

As far as the physics of soil and water is concerned, it is not a difficult matter to study it and acquire a correct comprehension of its underlying principles. To observe the action of water in the soil the first thing needed is a good-sized box. One side is sawed out, leaving a margin of an inch or two to hold the glass which is then inverted, and when the dry dirt is shoveled in it is held firmly in place. The advantage of this contrivance is that by looking through the glass the action of water introduced into the dirt can be accurately observed. A cover also is necessary to prevent the rain or snow from entering when it is not wanted. A piece of roofing felt or paper is about all that is needed for this. When this box is filled with dry dirt and packed as solidly as land which has been plowed and worked for planting purposes the soil it contains may be said to represent the seed bed.

Using Experimental Soil Box.

When a farmer wishes to know how far an inch of rain will penetrate cultivated land all he has to do is to pour an inch of water on the soil in his experimental box. He can then look through the glass and see exactly what happens to it, how deep it goes in and how many days it takes to dry out, and he can use as many inches as he wishes to experiment with. He can set it out at the beginning of the spring rains and tell exactly what the spring precipitation has been worth to his land and whether his chances of crops are good or bad. Through an iron pipe introduced into the bottom of the box, water may be allowed to seep in from the outside and whatever upward movement takes place by capillary action also may be noted. Experiments to demonstrate almost anything the farmer wishes to know concerning soil and water action can be made in this inexpensive and simple contrivance. Another reason for having it is that when he hears wild statements made about film water, capillarity, osmosis, etc., he can try them out when he goes home and arrive at his own conclusions.

The soil auger is another thing that the man who wants to understand his soil conditions should possess. This is nothing but a two-inch auger welded onto a piece of gas pipe about four feet long. The handle is another piece of pipe screwed on at right angles. In order to make deeper borings the handle is temporarily removed and more pipe screwed on. This implement is worked into the soil like any auger into wood and is then worked loose and pulled up without any twisting or screwing motoin. The result is that the auger comes to the surface holding a core of dirt sometimes weighing a pound or more. With the help of this implement anyone can ascertain how much moisture he has in his field and how deep it has penetrated. This is an important thing to know, for he can then tell what crops it is safe to plant and the likelihood of their maturing should the season prove dry.

It has been found by the use of the soil auger that in fields which have been farmed for some years according to the best conservation of moisture methods the crops are unable to use up all the water in the soil underneath and a reserve has been formed which increases every year usually at a depth of three or four feet. It is, therefore, evident that farming without irrigation under plains conditions, if properly done, becomes easier every year, for the roots of nearly every crop will go much deeper than this for water.

Water Always Moves Downward.

The movements of water in dry soil are always downward. When rain falls it spreads out and down in dry soil until it all becomes film water. When more rain comes it goes down further and again becomes film water, so that when there is a deep dry subsoil there is no free water except for a brief period while the rain is filtering down in the process of becoming film water. When free water is passing down through the soil granules, or rather between them, each particle hangs onto a film of water by virtue of its attractive power and the surplus free water eventually is all taken up and there is nothing in the soil but film water until more rain falls, therefore plains farming is done almost entirely on film water, while farming in the more humid states is done largely on free water.

Since we are all farming on film water it is to our advantage to know all we can about it. This water sticks to the granules until used by the roots of some crop or is evaporated. It does not move of its own accord like unattached or free water and is not subject to capillary action. In one of the year-books of the Department of Agriculture it was stated that by experiment it was found that water in the film condition could not be moved by a pressure of several hundred pounds to the square inch. This shows the folly of imagining that by packing the soil we can cause water to rise to the surface by capillary action. In fact, we would not want to do this if we could, for it is much better for the water to go deep into the soil where it will stay than to come to the surface where it would be easily evaporated. The idea was evidently borrowed from eastern agriculture where, on account of the abundance of free water down below it may to some extent work back to the surface by capillary action in dry weather. Water from a water table or as we commonly call it, "sheet water," often rises several feet by capillary action and by this means a whole bottom may have many feet of permanently moist soil of the greatest value for crops, especially alfalfa, provided the water table is not too close to the surface.

Air Movements in Soil.

When the soil is dry there is plenty of air between the granules and when it is a little loose it may be half air, bulk for bulk. When water falls it drvies out the air, filling the space between the granules, but after the surplus free water has percolated down leaving films on the granules the interstitial spaces are again filled with air so that in soil moist with film water there is always plenty of air. This air can move freely but very slowly in the soil, and the movements depend mainly on temperature. When the ground is hot the expansion drives the air upward, but at night when the air cools the tendency is downward. So long as there is any moisture in the ground the soil air is always saturated with it and on a cool night it will condense even in a dry mulch, particularly in one which has just been harrowed, and this phenomenon is usually attributed to capillarity, whereas it is really condensation or underground dew. It has also been noticed in beads on the roots of sunflowers after a cool night in the fall, even in ground apparently quite dry, but doubtless containing moisture lower down.

Under film water soil conditions there is always sufficient air for the needs of the plant, but under free water when the spaces between the granules are entirely filled there is not, and plants may lose their color and die if this condition is too prolonged.

When ground is newly plowed it is not fit for planting immediately because it is over-aerated and the roots will dry out, but after a while a rain comes and drives out some of the air, the soil settles and it becomes ready for seeding. Artificial packing is better than nothing, but it is not equal to nature's packing which requires time but no effort on the part of the farmer.

Water Capacity of Soil Varies.

It has already been shown that the water conserved in soil which is naturally more or less dry is of necessity film water, not free water, and it is interesting to know just how much of this can be conserved in different soils. My own experiments have shown that rich soils and clay loams hold more water in the film state than thin soils and sandy loams. On our Colorado farm the average was from 15 to 17 per cent. Professor Snyder of North Platte, Nebr., in a report some years ago, stated that the average at the experiment station was close to 17 per cent. Professor Kezer it was, I believe, who found that some sandy soils would hold only 14 per cent. The question naturally occurs as to what happens when the soil receives more water than it will hold. It simply passes down and wets up some more dry soil to the same percentage. In the spring of the year, before there has been any plant growth to use up any of the conserved winter moisture, the soil will be found to have its full complement of film moisture, therefore if the farmer knows how much his soil carries, and he finds with the soil auger how many feet of it there is, he can easily figure out what available water he has in the ground for his crops. Supposing for instance his land carries 16 per cent and he has three feet of moist soil from the surface down. This percentage means about two inches to the foot, therefore, roughly speaking, he has six inches of water conserved in his soil. It is pretty safe to figure two inches to the foot in any fairly good soil for 15, 16 or 17 per cent will run close enough to this estimate for any ordinary purpose.

Supposing it is required to know the film water percentage of a soil, how do we go about it? This is a very simple matter. A sample is taken and weighed, then dried in an oven and weighed again, the difference in weight being the water which has been evaporated out of it.

How Plants Use Soil Water.

Plants obtain their nourishment by sucking the films off the granules with their hair roots which, according to Professor Bose of the University of Calcutta, is accomplished by the pumping action of the living plant cells, which action, he says further, is also responsible for the circulation of the sap. In order that the hair roots of plants may function properly very close contact with the soil granules is necessary. This is another argument in favor of allowing the ground to settle after plowing and of thoroughly tamping the dirt around the roots of trees.

Moisture can be held indefinitely in the subsoil until the roots of plants use it up. A foot underground, where the soil is deeply plowed, the evaporation is practically nil, and where there are no plant roots there is an increase every year so long as cultivation is kept up, the water going deeper and deeper and forming films around the granules. In our Colorado orchard where the trees were widely spaced there was ten feet of moist soil at the end of six years. On the prairie joining the orchard the precipitation never penetrated more than two or three feet, and was usually all gone in the fall. The term available moisture or available water is often used with regard to plant growth because all the water in the soil cannot be taken up by the roots. When the percentage is reduced to somewhere about 4 to 6 per cent the film become so attenuated that the root hairs can do nothing more with it and the plants commence to wilt and dry up.

Making Beef From Silage and Grass

WELL-BRED STEERS OUTWEIGH AND OUTSELL THE ORDINARY KIND $3.00 A HUNDRED.

THREE-YEAR-OLD steers at the Kansas experiment station wintered on silage have made as good use of grass during the summer season as steers wintered on alfalfa. The results of this experiment indicate that the gains on grass are affected not so much by what the steers are fed during the winter period as the amount of fat they carry when they are turned to pasture. The twenty steers used in this test were marketed as grass fat cattle in October. The cattle wintered on silage had made an average gain to the steer for the three years of 929 pounds of which 255 pounds was during the wintering periods, with silage and a little cottonseed cake as the ration, and 674 pounds on pasture. The cattle wintered on alfalfa had gained 175 pounds to the steer during the wintering periods, on an exclusive ration of alfalfa, and 776 pounds to the steer on grass.

These steers were purchased from the herd of Alex Philip & Son at Hays, Kan., as they came off the cows the fall of 1919. One-half of them have been wintered on alfalfa hay alone for the past three winters, while the other half were wintered on silage and one pound of cottonseed cake daily to the steer. They had been pastured together on Kansas blue stem grass during the past three summers.

When these cattle were turned on grass April 30, 1922, the silage-wintered cattle weighed 1,113.27 pounds a head the alfalfa-wintered cattle 1,156 pounds a head. The silage-wintered cattle weighed 1,366.53 pounds at Manhattan, September 30, 1922, having made a pasture gain during the summer of 1922 of 253.26 pounds. The alfalfa-wintered cattle weighed 1,395.93 on the same date, having made a pasture gain of 239.93 pounds; the silage-wintered cattle having gained 13.33 pounds a head more on grass during the summer of 1922 than the alfalfa-wintered cattle. The silage-wintered cattle not only made greater gains than the alfalfa-wintered cattle, but made their gains more rapidly during the early part of the grazing season and did not go to pieces, as was predicted by so many who have not wintered cattle on silage.

During the first winter (1919-20) the steers wintered on silage gained 26.66 pounds more during the winter, but 14 pounds less on grass the following summer than did those wintered on alfalfa hay alone.

During the second winter (1920-21) the steers wintered on silage were fed about all the silage they would eat and gained 80 pounds more during the winter, but 166.54 pounds less on grass during the following summer than did those wintered on alfalfa hay alone. The silage-wintered cattle were carrying considerably more fat when they went to grass in 1921 than were the alfalfa-wintered cattle and did not make as good use of the grass, particularly during the early part of the grazing season.

During the third winter (1921-22) the steers wintered on silage were fed just enough silage to keep the winter gains slightly less than the gains of the steers fed alfalfa hay. Their gains were 26.59 pounds a steer less, but they gained 13.33 pounds more during the following summer on grass. This year the silage-wintered cattle did not carry as much fat when they went to grass as did the alfalfa-wintered cattle and made better use of the grass, particularly during the early part of the grazing season.

In addition to demonstrating that silage can be economically used in wintering cattle to be grazed, Dr. C. W. McCampbell, who had charge of the test, points out that it also shows the value of good breeding. These cattle have been maintained on roughage and grass all their lives, yet in spite of the fact that they were a part of the last cut of the tail ends of the Philip's calf crop of 1919, they left the grass for market as three-year-olds averaging 1,381.23 pounds each. Mr. Philip has been using high-class purebred bulls for the past forty-five years.

These three-year-old steers that had never tasted grain, weighing 1,289 pounds in Kansas City, brought $9 a hundred without cut-outs. It is interesting to note that several thousand grass-fed three-year-olds of ordinary breeding from the pastures of Kansas, Oklahoma and Texas were on the market the same day, weighing less than a thousand pounds. They sold for from $5.75 to $6.25 a hundred, a difference of $3 a hundred in favor of the well-bred steers sired by good purebred sires and kept gaining economically through the winter periods by feeding silage.

Litter Makes Ton and Half of Pork in Six Months

MORE THAN FIVE HUNDRED FARMERS COMPETE IN SOW PRODUCTION CONTEST

THE champion litter of the Hoosier ton litter club weighed forty pounds more than a ton and a half the day they were one hundred and eighty days old, and were produced at less than 5 cents a pound. So far as rapidity of growth is concerned, an official world's record is set.

There were five hundred and fifty-five farmers competing for the honors, but C. W. R. Schwartz, of Berne, Ind., and his old Poland China sow, Miss Pawnee First, were the proud winners of the contest which was conducted under the auspices of the Indiana Livestock Breeders' Association. Miss Pawnee farrowed eleven pigs April 11, 1922, sired by a purebred boar of the same breed, and after sixty days Mr. Schwartz relieved her of further trouble and carried them on to victory with 3,040 pounds of pork to their credit the day they were officially weighed.

According to the rules of the Hoosier Ton Litter Club, any farmer in Indiana could enter the feeding contest with one or more litters, by paying a membership fee to the Breeders' Association of 50 cents. By complying with the rules, he was promised a gold medal by the association if any litter was made to weigh a ton or over in 180 days, a silver medal if more than 1,800 pounds, and a bronze medal if more than 1,600 pounds. The rules provided for official ear marking and inspection, for the keeping of strict cost accounts, and for official weighing at the close of the period which was 180 days. Any litter, however, could be weighed within a period of three days before or after the 180th day, provided that day was not convenient, but additions or subtractions were to be made according to the average gain of the litter per day, for the number of days before or after, respectively.

Proves Merit of Purebreds.

The fact that the litter is from a purebred registered dam and sire is significant. Farm advisers, Federal and state departments of agriculture, agricultural colleges and breed associations have been talking purebred stock to farmers for a number of years, and it is therefore no accident that a purebred litter topped the grades and cross-bred litters of the entire 555 competitors.

The sire of the winning litter was a pig from the first litter of a gilt. The boar was two years old when the dam was bred for this litter. The sow, Miss Pawnee 1st, was one week over four years old when the champion litter was farrowed. Both sire and dam come from prolific ancestors, and many generations, carefully selected for gaining qualities and fecundity, are back of each.

This litter of eleven pigs was the fifth farrow of the sow. Her sixth litter has been farrowed since, making a total of sixty-seven pigs which she has farrowed for Mr. Schwartz, and she is credited with saving sixty-one of them. Her percentage of saved pigs is 91.

Care During Gestation Period.

When the sow was bred last fall, she was turned with the other nine sows of the Schwartz herd in a field, a part of which was corn stalks in which soy beans had been planted, and the remainder of the field an old clover meadow. They "roughed it" there until March 1, with an old hulled clover stack as their shelter. They had no feed during this period except what was gleaned from the stalks, beans and clover meadow.

After March 1, the mother of this litter was fed three ears of corn daily and some skim milk. By April 11, the date of farrowing, she had consumed 115 pounds of corn and 340 pounds of milk. The corn was worth 1 cent a pound and the milk was valued at 25 cents a hundred. The cost of corn and milk for the period amounted to $1.15 and 85 cents, respectively, or a total of $2.

Feed Consumed and Cost.

The litter was farrowed in the open with only a straw roof for shelter, but the weather was mild enough for such housing to be adequate. The sow had the run of a one-third acre lot of sweet clover, and the pigs were kept there throughout the entire feeding period. The sow consumed thirty ears of corn and eight gallons of milk daily during the entire sixty-day suckling period, and Mr. Schwartz says that no scouring in the pigs was evident at any time.

During the suckling period the feed consumed was 1,000 pounds of corn, $10, and 2,550 pounds of milk, $6.37. The boar service was figured at $1 and the feed for the sow during the gestation period $2, or a total of $19.37.

When the litter was six weeks old they were started on skim milk and shelled corn, and by the time they were sixty days old they were on full feed and entirely weaned. They were allowed all the corn they would eat from a self-feeder all the time. For four weeks of the time the corn was soaked in water, but Mr. Schwartz says he will never soak corn for hogs again as it is useless work. The skim milk was diluted about one-half and they were given all they would drink of it twice daily.

During the fourth and fifth months, the corn and milk were supplemented with 200 pounds of middlings and 300 pounds of ground wheat, both of which were mixed in the skim milk. Their forage consisted only of the one-third acre of sweet clover.

The feed consumed and its cost follows: Corn, 8,000 pounds, at 90 cents a hundred, $72; milk, 16,150 pounds, at 25 cents a hundred, $40.38; wheat, five bushels, at $1 bushel, $5; middlings, 200 pounds, at $1.50 a hundred, $3; Feed for sow during suckling and gestation, $18.37; service of boar, $1; clover lot, rent and seeding (estimated), $3.58; Total cost of litter, $143.33.

The pigs were sold for pork and the 3,040 pounds at 9 cents a hundred brought, deducting cost of production, a net gain of $130.27. It may be better said that the $130.27 was the labor and investment in the sow.

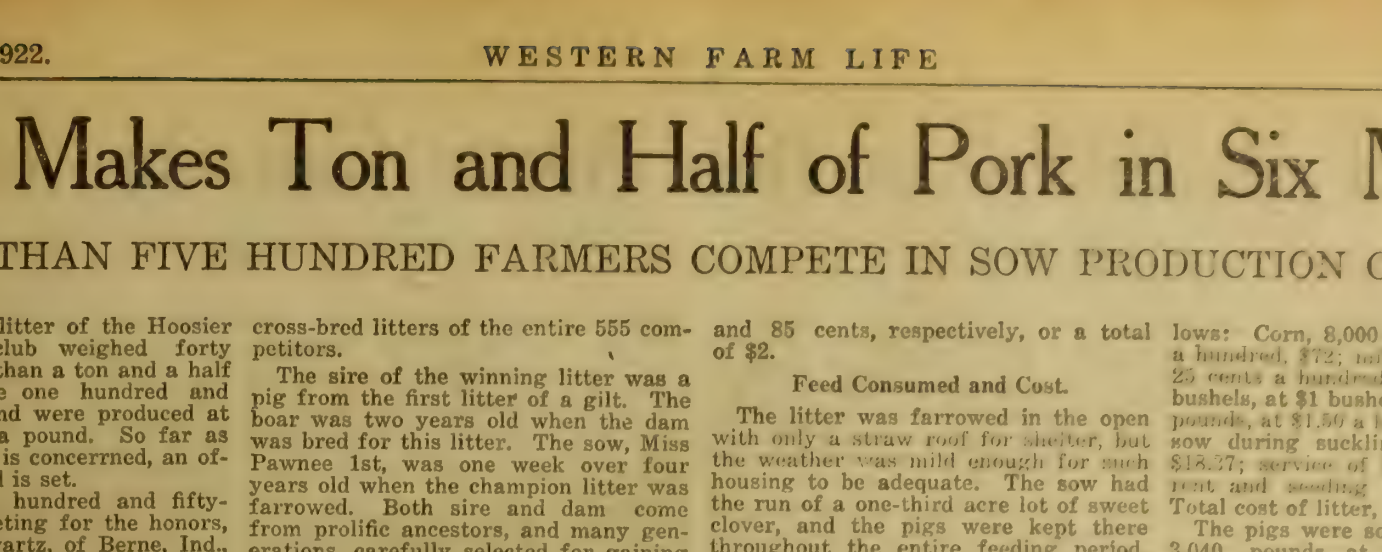
The cost of producing the litter on a pound basis was four and seven-tenths cents, which leaves him a margin of four and three-tenths cents a pound. The profit above cost was 91 per cent.

Rapid Gains Made.

The pigs in this litter averaged 40 pounds in weight when they were eight weeks old; at 90 days, 95 pounds; at 150 days, 205.3; at 165 days, 243.8, and at 180 days they averaged 276.4 pounds in weight. The average daily gain to the pig from farrow to eighty days was 1.7 pounds. The largest barrow weighed 330 pounds at the end of the period, and the "runt" weighed 249 pounds. In one fifteen-day period, the largest barrow gained 49 pounds, or an average of 3⅓ pounds a day.

This ton and a half of pork produced from one litter of pigs in six months was not a college experiment conducted under ideal conditions, nor were they extraordinary pigs fed under exceptional farm conditions.

They were the kind of stock, fed on the kind of feed that can be produced in every section where hogs are successfully grown. The value of the achievement comes from the fact that it was accomplished on a sure-enough farm by a regular farmer. It took no more work to produce the ton and a half than it would to have produced a half ton of scrub pork, as putting corn in a self-feeder and pailing out skim milk twice daily is not arduous labor. Prolific sows, pigs bred for rapid and economical growth, with plenty of good feed properly fed, is the uncopyrighted story.



These eleven purebred hogs, winners of the Hoosier Ton-Litter Contest, represent 3,040 pounds of pork as the production of a single litter, 180 days from birth.

How to Economize Through Proper Car Loading

CO-OPERATION OF SHIPPERS MAKES FOR INCREASED FREIGHT TONNAGE

IF shippers had loaded cars properly, it would have been possible to move 4,134,660 tons more freight in the first quarter of 1922. This means that underloading required 137,822 more cars in that period than otherwise would have been used.

Load a freight car 10 per cent in excess of its marked capacity—and you help yourself and add to the car supply for everyone.

Even in normal times the railroads might have difficulty in meeting the requirements of the country just after the harvest period. In the present situation, with the strike of the shop crafts not wholly settled; with the extra volume of coal and perishable traffic calling for immediate movement; with an unusually large amount of merchandise and miscellaneous freight to be handled—more than the railroads have had to transport at any time in their history except in the fall of 1920—it is a problem of surpassing magnitude. The total carloads of freight moved for the week ended September 2 was 931,598. This was 54,702 more than were handled for the week ended July 1, just before the shop employes' strike began. It was 100,310 more carloads than were handled in the same week of 1921, and only 30,000 fewer care than were handled in the same week of the record-breaking year, 1920. Indeed, it was only 9 per cent less than the largest number ever moved in any week in history, in October, 1920.

The railroads have been predicting the present situation almost continuously since the government released the properties at the end of Federal control in 1920. At the beginning of 1922 the roads had only 3,500 more locomotives and only about 57,000 more freight cars than five years ago. The situation with respect to bad order equipment, which had been serious for a long time before the strike began, can and probably will be improved in a comparatively short time. The railroads are trying, under very adverse conditions, to give improved service. To get this improvement every shipper will have to give the fine co-operation that was given the railroads in 1920. This co-operation consists chiefly in observing these rules:

Do not order more cars than can be loaded promptly.

Load in one day, especially grain.

Do not ship to glutted markets; to do so means delay in unloading or reconsigning.

Load commodities 10 per cent over marked capacity of car.

Load light weight or bulky freight to the full cubical capacity of the car.

Work a little overtime in the evening to finish loading. Do not use "free time."

Do not reject cars for small defects which the station agent or his helpers can repair in a few minutes.

Try to increase the loading of cars to an average of 30 tons from the present 23 or 24 tons.

By loading promptly you can help the railroads to increase the daily mileage of cars from the present 24 to 30 miles. The average freight car is moving only about 2½ hours out of 24. The remainder of the time it is lying on sidetracks or industrial switches.

By adding two tons to each of 200,000 cars of coal 400,000 extra tons can be moved weekly, or 20,800,000 tons a year extra coal in the same number of cars. It is a matter of record that one industry, associated with construction works, used more than 40,000 unnecessary cars in a few months last year by reason of underloading.

The settlement of the coal strike threw upon the carriers a volume of coal needed in the west and northwest, and caused the issuing of priority orders by the Interstate Commerce Commission. An extremely large fruit crop in every part of the country caused a demand for every available refrigerator car and for an extraordinary amount of power while the railroads themselves were struggling with the strike of shop employes. With labor disturbances disposed of, at least in part, the situation is bound to improve rapidly, although western roads have been returning to normal conditions with gratifying rapidity. The increased loading of freight in the east for western territory indicates an improvement in the supply of box cars for the immediate future, according to the latest reports from the car service division of the American Railway Association in Wa[illegible]

Survival of Fittest in the Potato Growing Industry

PRODUCERS MUST GROW THE BEST AND SHIP THE BEST OR QUIT

WE must do better work in our potato growing if the industry is to maintain its present position in Colorado," remarked Lou D. Sweet, the well-known potato specialist, recently, in discussing the present situation. In many sections potatoes are not paying for the cost of digging and in some localities thousands of acres may not be dug at all. Mr. Sweet is a firm believer in the necessity of paying more attention to disease control, using better seed, and the working out of proper rotations. He himself is now specializing in the production of seed stock. Potato growers who expect to stay in the business are generally coming to realize the need of doing better work all along the line. The present marketing situation has been a great stimulus to the exercise of the thinking powers of those engaged in the industry.

In a recent editorial in the Potato Digest, entiled "Why Grade Closely," the importance of sending nothing but standard, properly graded stock to market was emphasized in view of the present potato marketing situation. In a later issue, S. D. Watson, writing in the Digest, comments as follows:

"A few years ago, at the time when the potato grading rules were made effective, it was usual to hear the question asked, 'What do we need with such grading rules? We are selling our own potatoes and are satisfied with results as they are.' Now we read notices and advertisements such as this: 'Graded U. S. 1 or Better.' This inclines us to believe that it will not be long till grading rules will be advanced a step higher than 1¾ inch screen for the long and 1⅞ inch for round varieties. Even though both Ohios and Whites may pass the requirements for size, yet they may be undesirable for eating purposes.

Quality Grading, Good Business.

"It is a fact that many shippers are grading away above the requirements now and while it is quite possible that they will not receive a price anywhere near commensurate with what they would have received on such graded stock in past years, yet this quality grading is good business and good policy.

"It is probably true that many of our readers, especially those who own or grow potatoes in poor soil, as well as those who give but little care to the best methods of production, will take issue with us in reference to some of the above statements, but when the immensity of potato production at the present time is realized, it is plainly to be seen that it is a question of the 'survival of the fittest.' In such a case, the grower of small or defective potatoes will be forced into the production of some other commodity while the ones who can produce and put on the market 'the best' will succeed.

"Compare, for instance, the barrel apple grade with those of potatoes. Number 1 is graded 2 inches minimum size. This is not a large apple, but of nice size. If necessary to pare before eating, the waste is not so great as in a potato for the reason that it has no eyes. If put up in boxes and packed according to size, it is always the larger ones that bring a higher price on the market. Neither is it a question of what you or I think, but what the consuming public thinks and what they ask and are willing to pay for.

"It is doubtful whether the farmers in the potato producing sections can ever get together and curtail production so as to demand the higher prices necessary to realize a sure and certain profit and if not, it will most likely result in a freeze-out, by which the grower and shipper of poor or partly graded potatoes will, eventually, be forced out of the business. In the meantime, however, all shippers of both good and poor quality must suffer alike in a year of heavy production.

This illustration shows the results of one year of field-selecting seed potatoes. The seven rows on the right are from seed selected in the field. The remainder of the field was planted from ordinary seed.

Swapping Dollars.

"One more feature that must not be forgotten is this: Suppose the various railroads had been able to furnish all cars necessary or asked for, what would the result have been? The market price has been so low as to return a minimum of profit. In many cases, it was just a matter of swapping dollars or again a decided loss, but if 50 per cent or even 25 per cent more cars had been placed on an already overloaded market, it would have been ruinous.

"Had the crop throughout the country shown a decrease instead of increase, everyone interested in potatoes, especially those in marketing centers, would have bought quickly and stored. The majority of homes would be putting in their winter supplies. As it is, they say: 'O, well, potatoes are so cheap this year we can buy any time. There are so many.'

"Add to this the fact that the weather has been so mild that they put off all thought of winter and the storing of food, and the combination was such as to partly cause the present stagnation in the market for which the people may have to pay later in the season.

"Growers and shippers, stick to good grading. The poorer the market, the better you should grade. Grow the best and ship the best or quit. Success is not gained by mediocrity but by giving the highest and best possible, even though we may have to wait some time for the good results to follow."

Market Outlook for Farm and Ranch Products

WHEAT MARKET RESPONDING TO FACTORS FAVORING HIGHER PRICES

Edited by Glenn G. Hays.

ALTHOUGH it is universally recognized that agriculture has benefited least of any of the major industries from the business improvement which has occurred in recent months, yet farmers are much better off than they were.

Some measure of the change that has taken place is furnished by a comparison of present prices with those prevailing at the corresponding time last year. The comparative table gives average prices of the leading farm commodities early in November this year, and on the same date in 1921, together with the percentage of change. Of the twenty-two commodities, seventeen are higher than last year and in most cases the gains are quite substantial. With but a few exceptions, the advance is not at the expense of crop yields or quantity of production of livestock or livestock products. In the five instances in which prices are lower than last year, decidedly increased production was a factor.

Commodity—	Nov. 2, 1922.	Year Ago.	Percent Incr.
Fat cattle, cwt.	$ 7.50	$ 6.75	8.7
Steers, cwt.	10.75	7.70	39.7
Lambs, cwt.	14.05	8.80	59.7
Sheep, cwt.	6.80	4.00	70.0
Wool, lb.	.57	.35	63.0
Butter, lb.	.48	.43	11.6
Cheese, lb.	.245	.20¼	20.9
Eggs, doz.	.41	.34	19.2*
Hogs, lb.	.18	.22½	20.0*
Wheat, bu.	1.20½	1.01½	18.7
Corn, bu.	.72	.47	52.2
Oats, bu.	.49¾	.39	27.8
Kafir, cwt.	1.68	.91	77.7
Rye, bu.	.84	.77	9.1
Barley, bu.	.67	.49½	35.3
Hay, ton	22.00	21.50	2.3
Flax, bu.	2.53¾	1.72½	47.1
Cotton, lb.	.247	.1875	32.0
Beans, cwt.	5.75	4.40	30.7
Potatoes, cwt.	.95	1.07½	11.9*
Onions, cwt.	1.65	3.75	56.0*
Apples, bbl.	5.50	8.25	33.3*

*Decrease.

This is not the only evidence in the [illegible] Last year farmers were hard [illegible] for funds to carry on their ac[illegible] and the War Finance Corporation was making extensive loans. These [illegible] are now being repaid at the rate of [illegible],000,000 a month. Furthermore, in [illegible] sections, at least, most farmers are paying off their bank obligations in advance of the due date.

High taxes and interest have not eaten up all the increment as farmers are buying more general merchandise than last year. The two leading mail-order houses sell largely to farmers, and it is significant that Montgomery Ward reports an increase in its October sales of 35.31 per cent over October, 1921, and Sears-Roebuck a gain of 17.7 per cent in the same interval.

Cattle Market Breaks.

Under the heaviest run of western rangers of the season to date, and further liquidation of short-fed steers prices declined at Chicago from 50 to 75 cents on intermediate and lower grades of steers. In some cases values were as much as $2 below the October high spot. Western rangers declined 25 to 40 cents. Beef cows and heifers were 25 to 50 cents lower and veal calves as well as heavy calves followed the rest of the list and were 75 cents to $1 lower.

Car shortage has delayed the movement of rangers and the run promises to remain more heavy than usual during November. Some Canadian cattle are still coming into this country in spite of the tariff, Chicago receiving about 2,000 head last week and St. Paul reported an average of 5,000 per week throughout October.

Short-fed cattle have been especially difficult to sell as the market on beef of this class has been sluggish. The decline has been accelerated by some feeders becoming panicky as a result of the advance in corn and the decline in the hog market.

The market will decline further if receipts continue heavy, but the supply has decreased slightly in the last few days and the pressure may be reduced enough to maintain present values. There is little prospect of a decided advance and it is generally believed that the big premium on prime steers will decline within a few weeks.

The movement of stockers and feeders remains heavy and would be still greater if cars could be obtained for shipment from the central markets. Prices have declined in the last few days, especially on heavy feeders. Stock cows and heifers are unusually cheap in view of the level of cattle values, most of those going out from Chicago at from $3.50 to $4.75.

Slump in Hogs Checked.

When prices of hogs at Chicago neared the $8 level, packers displayed more interest and the decline which has been rapid in the last ten days was checked for the time being. Receipts are gradually increasing and a further addition of 25 per cent is probable in the next six weeks. This will be offset in part, at least, by an increase in purchases for eastern shipment which at the present time are only about 60 per cent of those at the corresponding period last year. All observations in the country indicate that the hogs are reaching market condition at a rapid rate and a heavy run during the late fall and early winter months is assured. At the present time $8 at Chicago seems to be the fighting level, but it will not be surprising to see a number of dips below that figure. Consumptive demand remains broad and the movement for export is heavy. Stocks of hog meats and lard in storage on November 1, when the new packing year begins, were not excessive.

Sharp Break in Lamb Market.

The lamb market suffered the worst break in a number of months last week and prices dropped to the lowest level since early in September. Receipts in the Middle West were heavy and Buffalo, Pittsburgh and Jersey City reported heavy runs from adjacent territory, so that demand from the east was much less brisk. The dressed lamb trade also declined sharply under competition from other meats. Feeders are still taking a large quota, but their interest ebbed when fat lambs slumped and thin lambs likewise are down about $1 from the recent high point. The late run of Westerns consists mostly of feeders.

Wool Market Continues Firm.

The wool market continues firm, with prices slowly working higher. Mills are about as active as they ever become and only the limited supply of wool in the hands of dealers or growers prevents the consummation of larger sales. Foreign markets are strong and give evidence that prices are not yet at the top. Growers are primarily interested in the prospective value of the new clip and predictions of materially higher prices are numerous. Already a few lamb feeders are shearing in order to take advantage of an advance in wool.

Advance in Wheat Resumed.

After two weeks of hesitation the wheat market is again responding to the factors favorable to higher prices. The main features in the situation show but little change. Car shortage and port congestion continue and are responsible for scarcity of wheat in position for quick shipment. Canadian wheat is still coming from farms at a phenomenal rate and is piling up at lake ports, but is not exerting much pressure on the world market. World shipments each week are not running as large as the estimated average requirements of importing countries. Domestic mills are operating at above the normal rate for the season, although the fall usually is their busy time.

Reports from abroad continue to point to the necessity of large purchases right along and the prospective surpluses from the Southern Hemisphere do not appear large enough to depress prices later, although they will limit the amount of any advance. The combined surpluses of Australia and Argentina appear to be about (Turn to Page 18)

Farmers' Week at Agricultural College

PROGRAM OF INSTRUCTION AND ENTERTAINMENT OFFERS INSPIRATIONAL OPPORTUNITY OF YEAR.

FALLING in line with the leading agricultural colleges of the United States, Colorado Agricultural College at Fort Collins is announcing a Farmers' Week for December 11 to 15, during which opportunity will be offered for study of the practical side of farming and home economics, in addition to the usual winter program of the Colorado Farmers' Congress. Men and women of national note will appear on the program. There will be ample opportunity for discussion of pending agricultural questions; legislative matters will be taken up and action is looked for on a program of farm measures to be put up to the next legislature. Social and entertainment features will be provided for. In fact, it will be a worth-while week for the farmer and the farm family from every standpoint. It will be the year's educational opportunity for the busy, progressive farmer.

General sessions of the Colorado Farmers' Congress are scheduled for afternoons and evenings, while the mornings are to be devoted to schools of agriculture and home economics, in sectional divisions. There will be practical instruction, by lectures and demonstrations in agronomy, animal husbandry, poultry raising and home economics.

Another event of the week will be the Colorado Rural Life Conference, the general sessions of which have been merged with the Congress sessions, so that all may share in discussions and addresses on the social, religious and educational side of farm life.

Among people of national note who have been given places on the program are the following: Congressman Sydney Anderson of Minnesota, who was chairman of the Agricultural Inquiry Commission which had charge of the survey of agricultural conditions last spring, the results of which, recently published, have been designated as the most complete and soundest analysis of agriculture that has come to light since the Roosevelt Rural Life Commission made its report twelve years ago; Dr. Henry Jackson Waters of Kansas City, now editor of the Kansas City Weekly Star, and formerly president of Kansas State Agricultural College; Governor Henry J. Allen of Kansas, famed for the establishment of a court of industrial relations through which it is sought to prevent strikes, and Governor Oliver H. Shoup and the new governor-elect of Colorado. The latter will outline policies regarding agricultural legislation and make his keynote address to the farming public of Colorado. Dr. S. B. Fracker, state entomologist of Wisconsin, known throughout America as an authority on bees, and James E. Tucker of Royal Oak, Mich., the noted poultry judge, also will speak.

The Colorado Farmers' Congress, which is the organization sponsoring Farmers' Week, and its varied activities, will meet in thirteenth annual session at 1:30 p. m. December 11. Accredited delegates are entitled to a vote at the Congress business sessions, but all meetings are open to any and all farmers or others interested in farming and rural home problems. The object of the Farmers' Congress is "to furnish opportunity for effective co-operation between the various organizations for the promotion of agricultural development and education within the state, and to act in an advisory capacity to the State Board of Agriculture."

The membership of the Congress is made up of regularly appointed delegates from all state, county and local livestock, agricultural, horticultural and rural women's organizations. The following provisions from the constitution show how these appointments originate:

Each state livestock, agricultural and horticultural organization to appoint three delegates.

Each county or local livestock, horticultural and agricultural organization to appoint two delegates.

Each county, one delegate, to be selected by the county commissioners.

Each women's rural organization, two delegates selected by its members.

The State Grange to appoint three delegates at large, and each local grange to send two delegates.

The State Farm Bureau to appoint three delegates at large and each county bureau to send two delegates.

The Farmers' Educational Co-Operative Union of America, three delegates at large, and each local union to send two delegates.

The Alumni Association of the Colorado Agricultural College to appoint three delegates.

Ten delegates at large to be appointed by the Governor of the state.

The executive board of the Congress to add to the list any organization whose purpose is to promote the agricultural interests of the state.

Instruction in agronomy, animal husbandry, poultry and household arts will be given at morning sessions, in sections, from 8:30 to noon, December 12, 13 and 14. There also will be sectional meetings of the Colorado Rural Life Association, and general meetings at which this activity will be combined with the Farmers' Congress program. Each afternoon and evening there will be addresses and general discussions. Motion pictures illustrating various phases of rural life will be shown. There will be community singing and special musical numbers furnished by the College Conservatory of Music, under direction of Prof. Alexander Emslie.

Following the Farmers' Congress sessions there will be meetings of various state associations, including the Colorado State Farm Bureu, which convenes December 15. Other organizations also are planning to meet during the last two days of the week. Following are the officers of the Colorado Farmers' Congress: Dr. I. L. Gotthelf, Saguache, president; W. T. Lambert, Sedalia, first vice president; Roud McCann, Fort Collins, secretary-treasurer. The executive committee consists of the officers and the following: J. P. McInroy, Denver, Denver district; E. J. Leonard, Fort Morgan, Plains district; E. R. Bliss, Greeley, Northern district; F. S. Carmen, Grand Junction, Western district; David Halls, Mancos, Southwestern district; C. E. Wilson, Villa Grove, San Luis Valley district; R. S. Elting, Hot Sulphur Springs, Northwestern district; John C. Vroman, Jr., Manzanola, Arkansas Valley district.

Measuring Irrigation Water.

Irrigation water is becoming so valuable that it is highly important for users of water to have means of accurately measuring it. The United States Department of Agriculture has just published a bulletin entitled "The Farmers' Short-Box Measuring Flume," which contains information that will be an aid to the more accurate distribution of this most valuable commodity in irrigated sections—water. Copies of this bulletin may be had upon application to the Department at Washington, D. C.

Milk and the leaves of plants are to be regarded as protective foods and should never be omitted from the diet. —Dr. E. V. McCollum.

Will Your Child Be Next?

Here are some startling facts:

"The New York State Health Department," says a leading national farm journal, "has found that twenty-one percent of the country school children have defective vision as compared with five percent of city children."

Four times MORE eye trouble in the country than in the city—*WHY?*

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Unavoidable Delay in October 15 Issue.

As a result of conditions over which we had no control a portion of our subscribers failed to receive the issue of October 15 on time. A car of paper which should have been received long before the paper in storage was exhausted was delayed due to the freight congestion and car shortage, and despite all that could be done to hurry the shipment from the paper mill, did not arrive until the November 1 issue was ready for the press. Meanwhile the only thing we could do was to stop the press, mail out the copies printed and wait for the paper. When it came the remaining copies of the belated issue were printed and mailed. Those of you who receive the October 15 and the November 1 issue about the same time will know the cause and we trust you will accept this explanation, for no one could regret more than the publisher this failure to get the magazine to you promptly on time.

American Red Cross Roll Call.

The American Red Cross, chartered by Congress to relieve and prevent suffering in peace and in war, at home and abroad, depends for its funds upon the contributions received from the many who wish to share in its mission of love and mercy. Once a year it makes its Roll Call, which is an appeal to every person in the country for both moral and financial support. During war time the money came easy, for all were fired with a desire to have a part in relieving the human suffering involved, but the Red Cross is organized to perform its mission of service to all mankind, in peace as well as war. In every great calamity or disaster which may come in any part of the country the Red Cross is always on the ground immediately with just the kind of help needed in the emergency and before the local forces have time to organize. This year the Annual Roll Call in which the Red Cross renews its membership will take place in the period from Armistice Day, November 11, to Thanksgiving Day, November 30. Let us not forget to support this agency which is rendering such unselfish service in relieving suffering humanity.

Nation-wide Pig Survey.

A nation-wide pig survey is now being made by the United States Department of Agriculture in cooperation with the Post Office Department. If your mail carrier confronts you with a blank to fill out you will know that it is part of this effort to find out something about the number of pigs likely to be produced in the next six months. Last spring the first survey of this kind was attempted, covering seventeen states only. It was considered such a success that it was decided to make them twice a year hereafter and cover the whole country. It would be too great a task to obtain information from every farm, so the carrier is asked to select ten average farms on his route and distribute to them the blanks calling for the desired information. No effort of this kind can succeed without the hearty co-operation of the persons asked to furnish the desired information. We trust readers of Western Farm Life will promptly fill out the blanks as fully as possible in order that we may have dependable information from the mountain states on this question of future pork production prospects.

The importance of this survey to farmers in enabling them to adjust their production to the probable needs of the market is stressed by the Department. People who deal in crops and live stock, such as packers and commission men, have very extensive organizations for informing themselves of the production of crops and live stock. Farmers have no such organization of their own, and obviously information of this character is just as important to the farmers as to the people who deal in farm products. One of the functions of government is to gather and publish these necessary statistics in order that the producers may have some knowledge of what is going on in the way of production.

Big Crop Makes Strict Grading Imperative.

No stronger argument for strict grading of agricultural products going into general markets could be made than the daily occurrences in the marketing of the present potato crop. Records show that in seasons of abundant supplies in which the tendency is toward low prices, only products of high quality command the attention of buyers. Our normal annual per capita consumption of potatoes in this country is around 3.2 bushels. The production is in excess of 4 bushels per capita. Under such conditions buyers pick their supplies. Shipments of ungraded potatoes not only are pulling down the general price level to the producers, but actually increase the marketing cost to the consumer. It costs just as much in freight to deliver ungraded products as graded, and it costs more to handle the ungraded stock on the consuming market. The presence of inferior potatoes tends to reduce consumption when just the reverse is needed in a year of above normal production.

By careful attention to proper grading at the production end, handling charges can be reduced, fewer sacks will be required, freight costs will be less, and higher prices will be received for the carefully graded stock. The total returns will be more than would have been received for a larger quantity of ungraded supplies. The necessity for doing better work all along the line in potato production is pointed out in an article on another page of this issue. The principle applies to other lines of production.

A reader of Western Farm Life recently criticized the magazine because he said we should expend our efforts in pointing out the necessity for producing less and getting more for it, rather than to strive for greater production. It is true that in years of big crops, farmers oftentimes do not receeive the largest returns, but it is also true that in such years the potato grower, for example, who has produced large acre-yields of clean stock, uniformly high in quality and then sent to market a carefully graded product, makes more than the grower who, on perhaps a much larger acreage, produces a crop of inferior quality and of smaller acre-yield. As the writer in the article referred to points out, the grower should strive to grow the best and market the best or he will be forced out of business.

Should Support Predatory Animal Fight.

Predatory animals cause enormous stock losses in Colorado and the mountain states. The Biological Survey has demonstrated the effectiveness and economy of its campaign of eradication directed against coyotes, bob-cats, mountain lions and other animals destroying stock. For a number of years the United States Department of Agriculture through this buerau has been carrying on a relentless war of extermination against these foes of the stockman. Up to 1919 no help was given by the state in the work. At that time the state co-operated to the extent of appropriating $45,000, which was met by the Government on the basis of better than three to one. The Colorado Stockgrowers' Association is now sending out a call to its members urging them to send in their views on the matter of continued state support to the secretary, Mrs. Evelyn Bleasdale in Denver, in time for the executive committee to give them consideration at its meeting to be held November 21, at which time a predatory animal committee will be appointed. It is pointed out that failure on the part of the state to co-operate may result in the Government work, which has met with so much favor among stockmen, being confined to the national forests. We believe stockmen should heed this call and freely express their opinions on the need for state co-operation. It will be up to the next general assembly to take action on this matter of so much importance to stock growers.

Farmers Must Prosper as Well as Produce.

As a nation we have been spoiled by obtaining for a considerable period of years many of our food crops at less than the cost of production. Producers did not realize the economic wrong of this process for no hardship resulted, because during this period we were exploiting our vast national resources. The end of cheap land and grass and all the other things that made it possible to produce so cheaply has come, and we are now striving to get on a basis of production in which the farmer will receive at least the cost of growing his products and putting them on the market. As Secretary of Agriculture H. C. Wallace pointed out in a recent public address, prices for farm products which are below the actual cost of production may for a time seem to be a good thing for the people in the cities, but in the end the result is bad for everybody. "Unless agriculture is prosperous it cannot continue to be productive," said Secretary Wallace. "Farmers can not and will not continue to produce at a loss. The young men will leave the farm and go to the cities. Just now the people of the United States seem willing to pay more for work in cities and industrial centers than on the farms. Almost the lowest paid laborers are getting higher wages than skilled farm hands, and more than many men who own their farms. If this continues more and more farmers will go to the towns and cities. No one can blame them for this, but it will result in reduced agricultural production. After a time prices of farm products will be so high that people in the cities will suffer. It is just as bad for the nation to have prices too high as to have prices too low. There must be a fair relationship between prices of things the farmer has to sell and prices of things he has to buy. There must be a fair relationship between wages on the farm and wages in the city. That is the only way we can have a balanced national life."

Farmers can be encouraged from the fact that Congress and our leaders who have been given administrative positions in our Government realize the danger from the present situation and are striving to do all they can to help the farmer to improve his condition. "In the Department of Agriculture," continued Secretary Wallace, "the emphasis heretofore has been put on showing farmers how to produce more. That is right and proper. But we propose to put the same emphasis on helping farmers get fair prices for their crops by adjusting their production to the probable demand and by better methods of marketing. We have reorganized the economic work of the Department. We have men in Europe seeking for new outlets and larger outlets for our surplus crops. We are studying changing business conditions as they are likely to influence the demand for farm crops, so that we can tell farmers about what they may expect. We are carefully noting production in agricultural countries which compete with us. We are improving our methods of estimating our own crops and livestock production. We hope to be able to report more accurately the number of hogs and cattle and sheep that are grown each year, so that there can be a better balance between our grain crops and our live stock, and in this way help our people avoid both overproduction and underproduction."

No Quarrel Among Breeds.

We sometimes observe tendencies to petty rivalry among promoters of different breeds of purebred animals developed for similar purposes. The folly of wasting any of our energy in attempting to supplant some other breed should be apparent if we would but consider for a moment that in all the years in which we have been striving to promote the wide use of purebred animals but 3 per cent of all the dairy cattle in the United States are purebred. Similar percentages will obtain in other classes of animals. With more than 90 per cent of our animals still scrubs, or at best grades only, it would appear that breeders of purebreds could make better use of their energies by joining hands in a common fight against the scrub which is exerting such a drag on the livestock industry of the whole country.

Senator Smoot of Utah announced recently that hereafter he would refuse unanimous consent for the printing in the Congressional Record of political speeches made outside the Senate. Senator Smoot is in charge of the Record and undoubtedly has authority to carry out his plans to purify it from the publication of speeches delivered for political purposes only. Probably many of the common people will think he has not more than started, for nothing was said about not printing the long drawn out political speeches made in the Senate, not for the purpose of changing any of the votes, but purely for consumption at home.

From the Nation's Capital

FARM TAXES IN EXCESS OF ENTIRE PROFITS OF BUSINESS, DECLARES GRANGE LEADER

E. E. Reynolds.

FRIENDS of the French-Capper truth-in-fabric bill are preparing to make a strong fight to secure action when Congress meets on this proposed measure, which has long been buried in the House and Senate Interstate and Foreign Commerce committees. At the recent annual conference of Better Business Bureaus of the United States and Canada, in Washington, Alexander Walker, president of the Sheep and Wool Bureau of America, made an effective argument in favor of the bill.

"As the result of economic law as inexorable as the law of gravitation," said Hr. Walker, "when the substitute and the genuine both sell under the same name, the substitute will inevitably drive out the genuine and destory the industry producing it, and the law of supply and demand will be supplanted by the practice of counterfeiting, the public will be forced to purchase the substitute against its will, and to pay for the substitute a higher price than would be paid if the truth were known.

"The secondhand article and the substitute are of economic value only when identified and sold for what they are. When the public is permitted to believe the secondhand article is new, and the substitute is the genuine, secondhand articles and substitutes become an economic menace, disrupt economics and outrage ethics.

"No merit that a secondhand article or a substitute may possess can justify the fraud of permitting the public to believe the secondhand article is new and the substitute is the genuine. Oleomargarine is better than poor butter, but this fact can in no sense excuse the fraud of permitting the purchaser to believe oleomargarine is butter. Some American fabrics are infinitely better than imported fabrics, but this fact cannot excuse the fraud of permitting the purchaser to believe American fabrics are imported. Many secondhand automobiles are better than many other new automobiles, but this fact does not justify of permitting the purchaser to believe a secondhand automobile is new.

"The only protection possible to the public against the fraud that now results from unidentified shoddy sold under the same names as virgin wool—the names of 'wool,' 'all wool,' and 'pure wool'—is legislation making it compulsory to identify substitutes in cloth and clothes, just as it is made compulsory to identify substitutes and adulterants in food and drugs by the Pure Food and Drugs Act."

Basing my conclusions upon the progress of the truth-in-fabric bill to date, I am convinced that it will never get through Congress so long as the wool growers' representatives persist in demanding that the word "shoddy" be used in the branding of reworked wool. The woolen mill men, clothing manufacturers and retail dealers all have a horror of the word. It is probable that if "reworked wool" were substituted for "shoddy" and "new wool" for "virgin wool" the bill would have less opposition from the trade and a better chance of becoming a law, and practically the same effect would be obtained as with the bill in its present form.

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Farmers Strongly Oppose Increasing Burdens of Taxation.—The tax question promises to be one of the big questions of the near future. While the farm organizations, some of them, are asking for increased appropriations for various uses they cannot consistently start a demand for lower taxes. The National Grange, which will hold its annual session in Wichita, Kan., November 15 to 24, has already begun an extensive investigation of the tax subject, having consistently opposed large appropriations.

Facts concerning the enormous taxes that must be collected by the Federal government in the face of steadily decreasing revenues, are well known. In response to numerous inquiries for details as to the large increase in the tax burdens of the people of the various states, Dr. Atkeson of the Washington office of the National Grange is making an effort to secure complete details from all the states as to state, county, township and municipal taxes for several years for the purpose of making a more complete comparison than the one recently given out. Enough has been received to make it safe to assert that the state and local taxes are today double the taxes paid in 1912 in practically all the states and average more than that amount. This includes all taxes assessed on property owners.

"It is probably equally safe to say," says Dr. Atkeson, "that the total amount of taxes farmers are called upon to pay this year in the entire United States amounts to a larger sum of money than the profits of all the farms of the United States this year over the cost of production of the entire farm crop of the country. Taxes have increased on city and town property, but the income from city and town property has in general increased faster than the taxes have increased. It is impossible for farming to pay taxes in excess of its entire profits. Should this continue it will be idle to ask farmers to remain on their farms, or to produce enough food to maintain the nation."

"It is no wonder," says Dr. Atkeson, "that the farmers rise up in protest against legislation which seeks to take money from the Treasury of the United States to be used for the special benefit of a special industry. Should a special session of Congress be called to consider the ship subsidy, it is apparent today that the protest which was in evidence in the last session of Congress will be more strongly appaernt than at that time. A special session will cost $30,000 per day, and that alone condemns it in the eyes of the public."

—x—

Attempt to Federate Co-Operative Marketing Organizations.—The National Council of Farmers' Co-Operative Marketing Associations, organized at the suggestion of Senator Arthur Capper in a letter to Aaron Sapiro, has established headquarters in Washington. Invitations have been sent to more than 200 co-operative marketing associations all over the United States and Canada to send delegates to the first annual convention of the new organization which will be held at the New Willard Hotel, Washington, December 14, 15 and 16. The many replies now being received indicate that this conference will be largely attended by representatives of co-operative organizations from all over the country. The invitation is limited to commodity co-operative organizations, including the big cotton and grain marketing organizations, ten wool growers' associations, eight livestock co-opeartive commission houses, thirty milk producers associations, three bean growers' associations, five hay growers' associations, six poultry co-operative marketing organizations, and a large number of fruit growers' co-operative marketing organizations. All farm papers are invited to send representatives to cover the convention and take part in the conference on co-operative education that will be a feature of the forenoon of the second day.

Among the matters to be discussed at this, the first nationwide meeting of commodity co-operative marketing associations, will be rural credits legislation from the standpoint of co-operative marketing associations. Other matters which will be discussed will be the common problems of co-operative marketing associations, particularly those attending the handling of commodities.

One of the chief objects of this conference is the establishment of an overhead organization in which it is hoped to federate all the farmers' co-operative commodity marketing organizations. The committee of organization announces its belief "that the future of agriculture, and that means the future of the country, is bound up in the suc-

(Turn to Page 13.)

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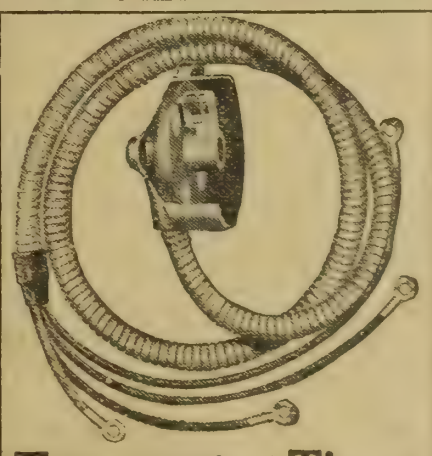

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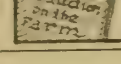

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A NOVEL
In Eleven Chapters.

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(Continued from last issue.)

"Your eminence," he cried, as he crossed the threshold, "as a nobleman of France I demand to know the meaning of this outrage!"

"Outrage, my dear marquis?" repeated the cardinal, and his voice was as smooth as silk. "You astonish me! My object in life is to keep France free of outrage. Tell me what has befallen you and I will most assuredly do all in my power to redress the wrong."

"Is it not an outrage," shouted the marquis, "for a band of your men-at-arms to seize me at the gate of my own house at midnight and hale me through the streets, to your palace, like a common felon?"

"Surely not a common felon, my dear marquis," purred Richelieu. "Felons of that variety are never received here. So you objected to my rough means of insuring a pleasant talk with you? Accept my humblest amends. And, believe me, it was but my earnest longing to see you that led me to such measures. I had heard that certain plans of yours went amiss today and that you were about to cross to England at dawn on a brief holiday. So I——"

"What do you wish?" snarled Des Ems.

His voice was still blustering. But from the shadowy corner where I stood I could see his hands clench in nervous apprehension. And there was an undertone of fear in his angry tones.

"What do I wish, monsieur le marquis?" echoed Richelieu, as though pained at his guest's bruskness. "Merely to speak concerning a charge you made tonight against a foreigner who chanced to cross swords with you."

I saw Des Ems' fists unclench. A breath of relief escaped his pallid lips.

"'Tis easily and briefly told, your eminence," he answered. "I was leaving the house of the Chevalier de Sieux when a man set upon me with drawn sword. I drew my own blade, but used it solely for self-defense; meantime shouting for the city watch. The watch came up, and I turned the fellow over to them on a charge of disobeying your eminence's most wise edict against dueling."

"And that is all?"

It seemed to me the cardinal was playing with him as a cat with a mouse. Indeed, there was something very feline in Richelieu's voice and in his very attitude as he put the simple question:

"That is all, your eminence. And," with returning bravado, "you will pardon me for suggesting it is far too slight an affair to warrant the dragging of a nobleman through the streets at this hour of the ——"

"The man who attacked you," pursued Richelieu carelessly, "who was he?"

"I do not know, your eminence. A big, rather ill-clad——"

"Oh, then it was not some one you knew? You had never seen him before?"

"Never, your eminence. He did not look like the sort of man I would be likely to meet in any sphere of life."

"Not even on the Auteuil road?"

Des Ems started. The cardinal went on in that same mild, friendly tone:

"Not even on the Auteuil road, this morning, on horseback? By the way, monsieur le marquis, I think you owe me an apology. Had we not an appointment, you and I, to meet upon that same road? And did you not fail to keep that appointment?"

"I—your eminence—I was delayed. My horse cast a shoe. When I galloped up, you were gone."

"And another man was there. Was it not so? A big man on a big horse, who held a snuff-box in his hand. This very snuff-box, by odd coincidence."

He lifted the box from the table. At sight of it, Des Ems wilted. He staggered slightly as though he had been struck.

"An agent of mine chanced to be in the crowd that gathered at sound of the duel this evening," continued Richelieu. "There are agents of mine in most Paris crowds, as perchance you are aware. He saw you take the snuff-box and fancied I might be interested in seeing it. So, having some knack at sleight of hand, he took it from your pocket and brought it to me."

"The—the man with whom I fought, then," muttered Des Ems, "was of course a spy of yours, too. I might have guessed it. He——"

"I am no man's spy!" I shouted, starting angrily forward into the radius of candlelight.

The insult had stung me to the quick, and I broke in on the scene without pausing to reflect. At sight of me Des Ems turned livid. He looked from one to the other of us, like a wild beast caught suddenly in a clever trap.

"Ah, H. Mallock," said Richelieu carelessly, "I had forgotten you were there. Since you chanced to hear a talk, much of which must have been quite unintelligible to you, it may perhaps amuse you to hear the rest?

"In a word or two, I can explain to you the situation and make plain to you the reason why I and my very worthy friend, M. des Ems, are chatting together so pleasantly at 3 o'clock in the morning instead of enjoying the sleep that awaits honest men.

"You see, we are both conspirators, he and I. And this is the dark hour in which conspiracies best thrive."

CHAPTER X.
Cat and Mouse.

"Here is the situation," added Richelieu, "in a mere mouthful of words. His most gracious majesty's brother, Duke of Orleans, has seen fit to conspire once more against my life and office. Among the many he enrolled in his plot was no less a personage than the Marquis des Ems.

"The marquis being (as I then thought) a wise man and eager to sail on the more favoring of the two gales, saw that the conspiracy must fail, and sought to save his own ornamental neck by making peace with me."

"Your eminence!" cried Des Ems.

Richelieu waved him aside and proceeded:

"Through agents of mine he offered to expose the whole conspiracy to me. But he prudently demanded that such information be given me alone and in person. Therefore, I consented to meet him, in disguise, this morning, near Auteuil.

"As a pledge of this and to identify any agent he might depute to meet me (in case he himself were suspected by his fellows or otherwise detained) he sent me the duke's own snuff-box, with the emblem of the plotters emblazoned on the lid. I was to return it to him or to his agent at the meeting."

Now I began to understand Des Ems' eagerness that morning to regain the precious box.

"I went to the appointed spot," resumed the cardinal; "instead of finding my friend, the marquis, four armed men sprang out from the bushes and sought to assassinate me. They were like to succeed, too. For I had sent my lackey out of ear-shot. Then you happily came along. Thinking you had my whole guard behind you, they scattered."

"Would that I had been in time to aid your eminence!" exclaimed Des Ems.

"I thank heaven most devoutly," answered Richelieu, "that you were not. The odds of five to one might have been too great."

"I—I do not understand."

"I put my spies to work on the case," said the cardinal. "Late this afternoon they had caught one of the four 'footpads.' I would not have him brought here. So, in disguise, I went this evening to the prison to talk to him."

Des Ems had grown of a sudden ashy gray. He looked, just then, older than did Richelieu himself.

"From this supposed 'footpad' I learned, M. Mallock, a new side of the story," continued his eminence. "It seems the marquis had not proven false to the Duke of Orleans, after all. He had merely been deputed by the duke to put me out of the way. He had chosen that simple method of enticing me to a lonely spot; and there had four rather expert hired assassins posted to murder me."

"It is a lie!" screamed Des Ems. "A foul, dastardly lie! I demand to face my accuser."

(Turn to Page 19.)

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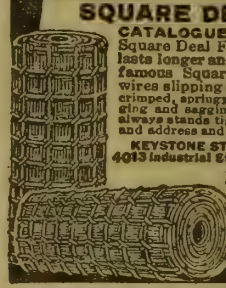

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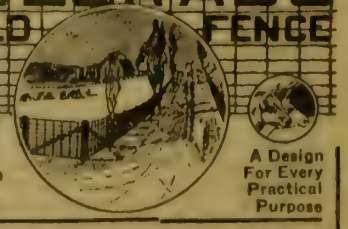

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Feeding Young Calf.

We have a three-months-old calf which has been running with the cow in pasture. I have been feeding her hay and grain but she will soon have to give up the milk entirely. I want to raise her the best I can on grain and hay. She seems to be growing, but not fat. We feed the milk cows dried beet pulp soaked in water with the addition of dry bran. We use a grain mixture of 100 pounds bran, 100 pounds rolled oats and 100 pounds dried beet pulp. The calf seems to like the soaked beet pulp better than the grain mixture. Which of the two is the best to feed and how much at a time?—R. T., Teller county, Colo.

Three months is a little young to cut the calf off entirely from milk, but it is possible to raise a calf in good shape even though weaned at this early age by feeding it rather liberally on grain. If you have any alfalfa hay, by all means give the calf all she will eat and since she likes the soaked beet pulp so well give her some of that also. This beet pulp can hardly be considered as a concentrate or grain. The oats alone would make an excellent grain ration, although it would add variety to put in some ground corn if this does not cost any more than the oats. In order to keep the calf growing properly feed her up to three pounds a day of grain at least. A little linseed oil meal would be an excellent addition to the ration, say about a half pound daily.—G. C. W.

Sugar-Cure for Pork.

I would like a recipe for sugar-curing pork. My father used to use black pepper and molasses, but I have forgotten the recipe. My mother also stored sausage in muslin bags, but it molded for me when I tried it.—Mrs. L. G., Arizona.

The following recipe is one known as the H. J. Waters dry cure and has been given wide publicity:

For each 1,000 pounds of meat use 40 pounds common salt, 10 pounds New Orleans sugar, four pounds black pepper, 1½ pounds saltpeter, ½ pound of cayenne pepper. Weigh the meat and take such part of the ingredients as that is a part of the 1,000. Let the meat cool thoroughly. After mixing the ingredients, half the amount should be rubbed well into the meat. Put the meat in a dry, cool place—never in a cellar. Let it remain two weeks, then rub on the remainder of the cure and let it lie about six weeks, when it is ready to hang. It is important that the meat be well rubbed each time the cure is applied, and that plenty of the cure be forced into the hock end and around the joints. The heavier and fatter the meat the longer the time required for curing. The warmer the weather the quicker the meat will take the cure. These arrangements are estimated on the basis of about 200 or 225 pound hogs and ordinary January, February and March weather.

A highly recommended formula for sweet pickle or brine cured pork is as follows:

For each 100 pounds of meat use—9 pounds salt, 2½ pounds sugar or 4 pounds molasses or syrup, 2 ounces saltpeter, 4½ gallons water. If the weather is warm ten pounds of salt is preferable. Allow four days for curing each pound of ham or shoulder and three days for each pound of bacon and smaller pieces. For example, a 15-pound ham will take sixty days; a piece of bacon weighing 10 pounds, thirty days. All the ingredients are placed in the water and thoroughly stirred. The brine mixture should be prepared the day before it is to be used, so that it will be completely dissolved. Place the hams on the bottom of the container, shoulders next, bacon sides and small cuts on top. Cover with boards weighted with stones or bricks, as iron rusts and stains the meat. Pour the pickle in and be sure that it covers the meat thoroughly. In seven days take out all the meat, remove the pickle, replace the meat in the container, weight it down, then cover again with the pickle. Repeat this process every seven days until cure is completed.

If the pickle becomes ropy, take out all the meat and wash it and the container thoroughly. Boil the ropy pickle, or better, make new pickle. When each piece of meat has received the proper cure, remove it from the pickle and wash in lukewarm water. String it and hang it in the smokehouse. The temperature of the smokehouse should not exceed 120 degrees F. Smoke the meat until it has a good chestnut color.

I do not know what has been the reason for your sausage molding. In storing sausage in muslin bags it is recommended that they be parafined after stuffed. It is claimed that sausage stuffed in bags and parafined will keep longer and better than in casings.

Write to the United States Department of Agriculture, Washington, D. C., requesting a free copy of Farmers' Bulletin, "Pork on the Farm, Killing, Curing and Canning." You will find this a very useful bulletin on this subject.—G. C. W.

Mare Has Thorough-Pin.

We have a four-year-old mare that developed a thorough-pin as a two-year-old. She has never been worked. It is bothering her so now that she cannot use the leg. What can be done to cure this condition?—G. B., Cheyenne county, Colo.

The "thorough-pin" is an inflammation of the structures around the hock joint, involving the sheath of the large tendon. The soft swellings on each side are due to an accumulation of joint water (synovia). The bog spavin represents a distention of the capsular ligament with synovia, on the front side of the hock. Certain conformations of the hock favor the development of these conditions. This is especially true of upright and "fleshy" hocks. Conformation represents a predisposing cause. An exciting cause is a strain due to slipping and pulling heavy loads.

The use of the term "thorough-pin" is from the fact that if pressure is applied on one side, the swelling will increase on the other. If the hock is hot, showing an acute inflammation, cold applications should be applied, and rest. If it has become chronic, complete rest, and the use of mild blisters, offer the only hope. The mare has no doubt repeatedly sprained her hock until the condition has become serious. A long rest, with the treatment suggested, will probably restore the animal to usefulness, but complete recovery is doubtful. —G. H. G.

Testing Herd for Tuberculosis.

In testing my herd of registered Holsteins for tuberculosis recently, the veterinarian pronounced one a reactor and two others as suspicious. He used two tests, one an injection at the root of the tail and the other the putting of tablets in their eyes. The one that reacted had a small knot on the tail at the point of injection and a quantity of flaky white matter came from the eyes. The two pronounced suspicious had what the veterinarian termed a thickening at the point of injection and tears flowed from their eyes. The reactor is a heifer I raised and as none of the older cows reacted and no other animals have been on the place since this heifer was born, except a bull which I disposed of when he was two years old, I am at a loss to know where the disease came from. Three days after the test was made I noticed the eyes of one of the cows tested was draining pus? What would this indicate?—C. A. R., Boulder county, Colo.

It is sometimes quite difficult to figure out exactly how an animal does become infected with tuberculosis. Since the veterinarian pronounced two of the cows all right it may develop later that these are tubercular. The tests for tuberculosis are so dependable that there is little reason to doubt that you have tubercular animals in the herd. Perhaps the bull was infected and left the place before the disease became apparent. It would be well to consult the veterinarian relative to the cow discharging pus from the eyes.—G. C. W.

Wife's Right in Homestead.

After living on a homestead for seven years, can I claim a half interest in it after moving away and not living on the place since last May? In dividing, can I take my choice or will I have to take any portion the other party sees fit to allow me? Can my husband sell the homestead without my signing the deed? What steps will I have to take to claim my share?—Mrs. J. L., Arapahoe county, Colo.

If the homestead is patented, the land would be divided on an agreed basis between wife and husband under order of the court, if the controversy went that far. The homestead entry is patented in the name of the husband and he can dispose of it at any time he chooses. He can sell it without the wife's consent unless there is some action for separation pending in the courts. If the wife cannot get a voluntary division of the property then a court order is the only remedy.—Mary Wolfe Dargin.

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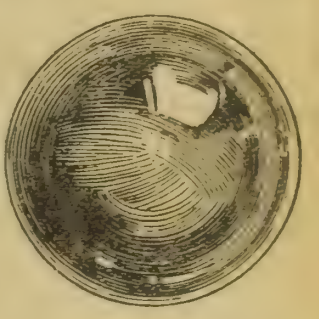

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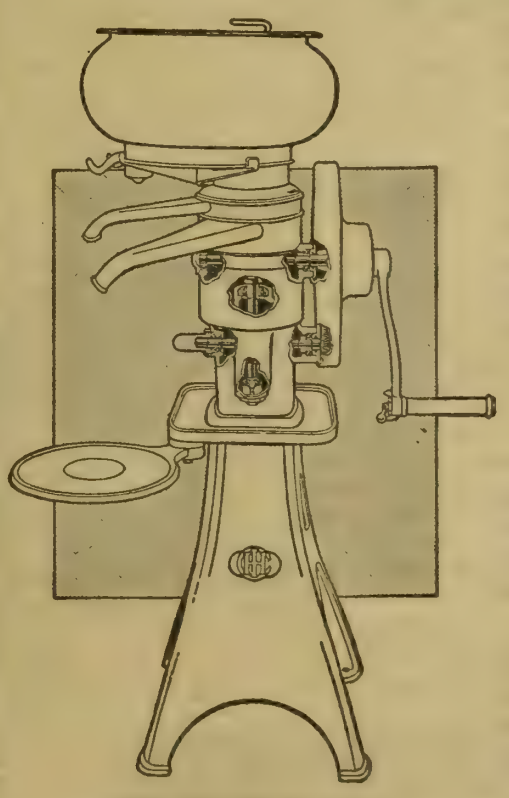

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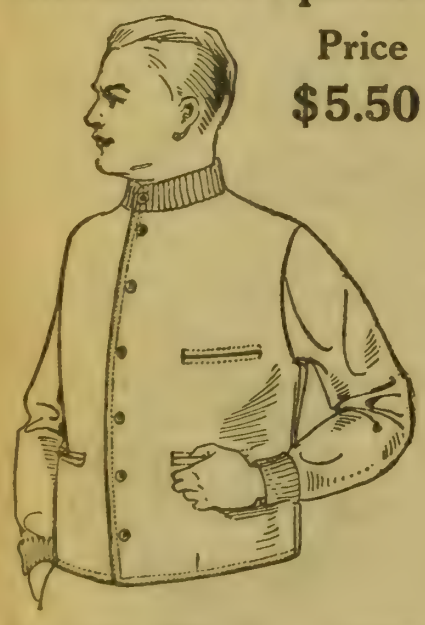

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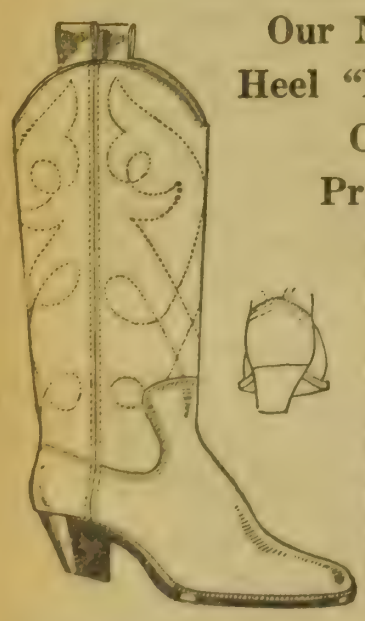

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Make Christmas Shopping a Pleasure.

Ever since the wise men of the East expressed their adoration through their presentation of costly gifts of gold, frankincense and myrrh at the cradle of the babe in Bethlehem, celebration of the Christmas season has had as one of its customs the giving of presents. This custom has sprung out of a desire to express the feeling of love and goodwill, which is so much a part of the Christmas season, in some substantial manner to those of our families and circle of friends. So long has this custom prevailed that the desire to give something to someone at this holiday season has become universal. At no other time of the year is there such a spontaneous outpouring of good-will which is evidenced by the gifts presented to friends and relatives. Oftentimes it is not confined to the immediate circle of friends or family, but reaches out to the unfortunate and strives to bring a bit of Christmas love and cheer to those who might be overlooked.

Christmas shopping has thus become a regular institution in our lives and by many is planned for months ahead. Too often, however, Christmas is thought of as a season which is coming at some remote future period and the shopping which we know we are going to do because we always have done it, is put off until the last moment and then comes the grand rush with which all are so familiar. We find the streets and stores crowded with the thousands who have done likewise and we see the tense, drawn faces of the belated shopper, indicating the strain and worry which comes to those who put off until the last moment the purchasing of the gifts which are to express their feelings for friends and loved ones at this most holy and joyous holiday of the year. Too often the strain and worry is such that the joy of giving pleasure to others is lost and it becoimes merely an unpleasant duty.

"Do your Christmas shopping early" is a slogan which has for its purpose the preserving of all the sentiment that should be associated with the offering of gifts. It is becoming more and more a practice to begin to plan for the gifts, whatever may be their nature, long enough in advance to make it a real pleasure, and what is more, to obtain the best selections and the best values in the purchases made. From a strictly business standpoint there are reasons in abundance for making the purchases as early as possible. In these times in which it is necessary for many to make a dollar go as far as possible it adds to the possibilities of reaching all our list to be remembered with appropriate gifts if we take time by the forelock and start out early when the stores are opening their stocks of holiday goods, including the many articles ranging from the strictly serviceable to the ornamental or those contributing more to the esthetic. The recipients of gifts from these early shoppers will find their tastes and personal desires given much more careful consideration than will those who receive gifts purchased at the eleventh hour.

It is always a perplexing question to know what to buy and where to buy. Those who have access to the immense stores in a large city like Denver will find the problem much simplified if they do not delay but do their Christmas shopping early. The early shopper gets a lot of real pleasure from visiting the various shops and stores while the goods purchased for the Christmas trade are all on display and still fresh. To those who find it difficult to get the things they want locally, a trip to the city will furnish the opportunity to get just the

articles desired. In a city like Denver the Christmas shopper will find anything and everything to be desired in carrying out individual ideas in the way of Christmas gifts.

Christmas time is essentially the child's holiday of the year and a trip to the shopping district of a large city with the wonderful displays of Christmas trees and Christmas decorations, perhaps with Santa Claus and his reindeer and sleigh as a feature of some store's effort to bring joy to the youngsters, is an experience long to be remembered by children so fortunate as to have this opportunity. The great white way with its many glittering electric signs in various colored lights, the moving picture shows, and other attractions too numerous to mention are things that will long live in the memory of the children permitted to visit through the shopping district during or in advance of the holiday season.

There are those, of course, who cannot think of such a thing as a trip to the city to do the shopping in person. It means a distinct loss to be debarred from the pleasure and the profit which comes from visiting the stores and making purchases only after careful inspection of what the many shops have to offer. It is not necessary however, to give up the idea of making the desired purchase from the wide assortment available in the city because unable to go in person. To persons so situated the well organized mail-order departments step in and through elaborate catalogs with their illustrations, descriptive material and price lists, it is possible to do a fairly good job of shopping without actually seeing the goods until they are received. Nearly all the big stores offer special inducements and service to those who must buy by mail. Their catalogs are ready in ample time to make it possible to do the Christmas shopping early by mail as easily as it is to do it early when able to go direct to the stores.

Those who have not tried out the plan of getting at the Christmas shopping early, whether it must be done at home or by mail, or whether there can be a trip to the city or not, do not realize how much more of a pleasure it becomes. It is a sad thing to be compelled to admit that Christmas shopping brings nothing but worry and strain when it should be accompanied by the highest of pleasurable emotions and feelings.

When this issue reaches our readers Christmas will be only a little more than a month off, and if you want to have your shopping a pleasure instead of a burden we would urge you to delay no longer but get busy, make plans, figure out the budget, and then put your plans into action and be able to say that you have had real joy in making your purchases.

From the Nation's Capital.

(Continued from Page 9.)

cess of commodity co-operative marketing of farm products, and that this meeting of men, and minds, to hear the leaders, to exchange experiences and ideas, to discuss common problems with the representatives of other groups, will be the most constructive forward step in the history of co-operation.

—x—

Report on European Demand for Agricultural Products.—Professor G. F. Warren of Cornell University, who spent a considerable time in Europe not long ago, as a representative of the United States government, has contributed to the Department of Agriculture some timely conclusions regarding the European situation.

Formerly, according to Dr. Warren, European buyers entered into our cash and speculative markets as soon as the crops were ready for market. Now they wait until the domestic crops have been consumed. The European farmers feed their own grain first, and only begin buying at the end of the season. This change means that America must retain ownership of its farm products for a longer period than before the war.

We may expect erratic markets until economic and political conditions become settled. Some of the countries are approaching solvency, but many are going deeper and deeper into debt. Progress made since the war has been slow.

HOLSTEIN BULL

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Tillage and Crop Yields.

"Rainfall is not the only factor in the growing of bigger and better crops," says J. M. Moyer of Yuma county, Colo. "While we could not raise a thing without rain," writes Mr. Moyer in his home paper, "why the vast difference in the yield of wheat and oats on different farms? Why should wheat yield from four to ten bushels to the acre in one field, while on the other side of a wire fence or a highway, wheat will yield thirty-five to forty-five bushels to the acre. There was about the same amount of rainfall on both fields and the same quality of soil. This happens all over our country year after year.

"The same thing applies to the oat fields. Why did I have one field which made only twenty bushels an acre while another field, which almost adjoined the first, yielded forty-seven bushels an acre, or nearly 2½ times as much.

"I claim that tillage of the right kind, and at the proper time, plays a very important part, as there are three very necessary elements needed to increase the plant life in our soil, namely, air, heat and moisture. The combination is incomplete with either one lacking, and this often happens where the ground is not properly cultivated and cared for.

"There is only one way, in my opinion, to raise wheat successfully, one year after another, and that way is by summer tillage. The expense of seeding, harvesting, threshing, etc., is nearly as great on a four-bushel crop as it is when the yield is four to ten times larger.

"As to oats, there are only two ways to grow them successfully, on summer fallow or where corn was well tended the previous year.

"My wheat this year, in which there was more than the average moisture in this locality, made only thirty-five bushels an acre of fair quality, while last year and the year before with much less rainfall, the yield amounted to forty-three and forty-three and one-half bushels respectively,and the grain was of good quality. Yet my average yield for nine years on summer-tilled land only is 38½ bushels an acre. Tillage makes the difference, and will every time when properly done."

The Farmers' Type of Cow.

On the specialized dairy farm suitably located for this line of production, cattle of strictly dairy breeding are to be recommended. The man running such a farm, who should be by training and instinct a dairyman, knows that he can make up on the production of his cows what he may be losing on the beef value of his male calves.

Many farmers, however, believe that they have a place for dual-purpose cows on their farms. They do not want to run a regular dairy, but their farms are not large enough to run paying herds of beef cattle alone. On such farms, cows may be kept that will produce a fair amount of milk and butter for household use and cash sales, and still raise calves that can be run on the range and make good beef. There are three methods of handling such herds. The cows may be milked entirely by hand, and the calves fed separated milk; the cows may be partially milked and the calves allowed to take the remainder; or each two calves may be put on one cow and the other cow milked.

The object in keeping dual-purpose cows is to make the cow do more than to raise a calf to pay for her keep. Where the cow makes no other return than to raise a calf, a cost of $20 or $25 must be paid by the calf, in addition to its own feed and care before profit can be made. On high-priced land it is hard to do this unless there is some other source of income. The dual-purpose cow should give enough milk and butter to pay for her own feed and care, leaving the calf free from overhead expense. Evidently this method means more labor and not quite such good calves as where calves are allowed the entire milk of the cow.—Charles I. Bray, Colorado Agricultural College.

Something Free for Each Reader.

At this time nearly every housewife is thinking of something new or out of the ordinary for the holiday season. Having this in mind, the Service Department of the Sun-Maid Raisin Growers have prepared a special Book of Recipes for raisin candy, also a book of recipes for jams and preserves. If you would like these recipe books they will be sent you free if you will drop a line to The Sun-Maid Raisin Growers, 305 Union Station, Denver, Colo.

State Farm Bureau President Resigns.

J. D. Pancake of Loveland resigned as president of the Colorado State Farm Bureau, following his acceptance of the Democratic nomination for State Senator from Larimer county. The vacancy was filled at the October 14 meeting of the executive committee by the appointment of W. S. Hill of La Porte. F. R. Lamb, who has been secretary of the State Farm Bureau, also has resigned, and Mr. Hill will have charge of the state office at Fort Collins until the annual meeting which will be held December 15 and 16, immediately following the Farm Congress.

Less and More.

Eat less; breathe more.
Talk less; think more.
Ride less; walk more.
Clothe less; bathe more.
Worry less; work more.
Waste less; give more.
Preach less; practice more.

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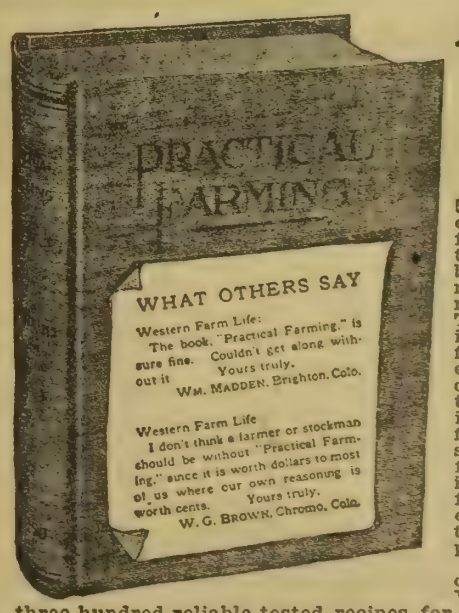
PRACTICAL FARMING



A 526-Page Book of Money-Saving Methods

"Practical Farming" is a book of 526 pages of practical farm experience, put together by twelve of the foremost agricultural experts. To the farmer who is progressive and broadminded, who desires to get the most out of his farm, it affords a never-ending source of information. Taking up such subjects as: Modern ideas in soil treatment and tilage; field crops, their adaptations and economic relations; vegetable, garden and trucking crops; fruit culture and forestry; important injurious insects and diseases affecting field and garden crops, fruit and shade trees; selecting and feeding farm animals for profit; beef making; feeding native cattle for beef; feeding range cattle for beef; diseases of farm animals and their treatment; the silo; making poultry pay.

Then, for the housewife it has a department, "Wholesome Cooking Without Waste," containing over three hundred reliable tested recipes for home cooking.

"Practical Farming" also contains a Feeding Chart printed in six colors. This Chart gives the analysis and feeding value of thirty different feeds, together with the fertilizer value per ton of each. There are over 200 fine illustrations in this book.

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Select Seed Corn in Field.

The most careful growers of corn save their seed ears from the good, early maturing plants. Probably the best method of doing this is to go through the field in advance of the husking, but the more common practice is to save the seed ears as the corn is being husked. The ears from the superior plants are thrown into a box at the side or in the front of the wagon. During the winter the corn grower who is looking forward to obtaining the best results from his next year's crop will go over the corn thus saved, selecting out the seed ears of the right type.

In selecting the ears for seed a great deal depends upon the corn plant itself. In the careless method of selecting seed corn in the bin along towards spring there is no means of determining the type of plant upon which the ear grew. The seed ear should come from medium-sized plants standing up straight and giving evidence of early maturity. The plants from which seed ears are selected should be free from suckers and should be growing under average conditions as regards soil, moisture and light. Seed ears should be heavy and of medium size and should droop on the stalk, but should not have too long a shank. It is desirable to have the ears at a good height from the ground in order to make it easy to husk and this point should be noted in making the seed selection.

U. S. Grain Growers Market Wheat.

A sales agency has just been opened at Minneapolis by the U. S. Grain Growers, Inc. President E. H. Cunningham announces that the Minneapolis Chamber of Commerce approved the application of the U. S. Grain Growers Sales Company of Minneapolis to do business through the grain exchange there October 10. The doors were open for business the following morning with T. H. Hagen of Lakeville, Minn., as manager. This agency will handle the grain of the northwestern states now under contract to the U. S. Grain Growers, Inc.

Two cars of grain from North Dakota were the first to be sold. They belonged to J. T. Faa of Divide county.

All elevators and growers in the territory tributary to Minneapolis are being notified that the U. S. Grain Growers is now ready to receive contracted grain.

The U. S. Grain Growers' Sales Company of Minnesota is incorporated under the laws of Minnesota. The directors are E. H. Cunningham, secretary of the Iowa Farm Bureau Federation; J. F. Reed, president of the Minnesota Farm Bureau Federation; Thos. H. Cashman, director of the Minnesota Farm Bureau Federation; H. W. Green, Leal, N. D., and A. F. Nelson, Benson, Minn. Officers are: President, J. F. Reed; vice president, A. F. Nelson; treasurer, Thos. E. Cashman; secretary and manager, T. H. Hagen.

The sales company has an initial capital stock of $25,000 fully paid up. Eventually it is planned to have this stock owned by the U. S. Grain Growers' Sales Company.

The U. S. Grain Growers, Inc., has approximately 8,500 members in the spring wheat area, of which number 5,000 are in North Dakota, 3,100 in Minnesota and the remainder in South Dakota. Contracts signed by these members represent more than 15,000,000 bushels of grain, which they have agreed to sell through the agency for at least five years. The agency will handle grain of all kinds.

Tiles will look like new if they are wiped with a cloth wrung out of skimmed milk, or polished with a furniture cream.

Now back to 1917 Prices!

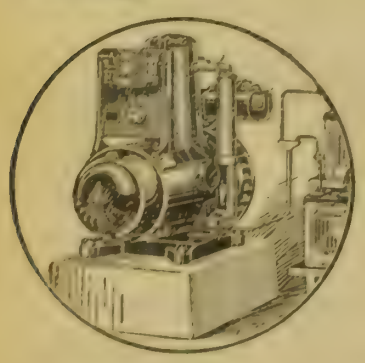
MAKE this Christmas one of the happiest your family has ever known—one they will never forget—one they will look back to year after year with fondest memory. Put Delco-Light in your home for Christmas.

Think of the happiness in your home on Christmas eve, with the family enjoying Christmas pleasures in rooms flooded with bright, cheery, Delco-Light.

And think, too, of the joy in the minds of all in knowing that Delco-Light will continue to make the home brighter, happier, every day in the year—that running water can be available anywhere you want it—that there will be power to run the washing machine, to milk the cows, and help with so many other chores.

You've probably been thinking for years that sooner or later you would buy Delco-Light. Now is the time to do it. The new big price reduction and time payment plan make it easily possible.

See your Delco-Light Dealer.



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Cow, Sow and Hen Save the Day When Crops Fail.

(Continued from Page 3.)

straight Scotch bull, Staunch Thought, also owned in this community.

Outstanding Bull in Grade Herd.

We had just come from looking at this bull Staunch Thought, now owned by A. P. Criswisser and his brother. Before going to the barn where he was kept, Mr. Haupert had announced that he was going to show us a real bull and we had to admit that he knew what he was talking about when we saw the animal. Staunch Thought is by Second Thought and is a beef bred bull showing plenty of masculinity, breed character and of pronounced beef type. After seeing him it was of particular interest to see some of his offspring. The Criswisser brothers connot keep him longer and unless someone in that community gets busy quick and buys him some outside breeder will slip in and take him away from the locality, which can ill afford to lose an animal of such merit and breeding power. Despite his pronounced beef breeding, Mr. Haupert has used him on his herd before his sale because he had access to no other bull, although he preferred to breed more along milk lines.

At the McIntire & Son farm we saw a herd bull of distinctly milking type, an animal purchased from the Colorado Industrial School at Golden, sired by Claywood White. Several females of good type were in this herd, which is just being started, among them a roan heifer purchased at the Haupert sale. This farm is a straight plains farm with no bottom land. It is evidently the intention of the McIntires to make the cow the anchor to windward to protect against the uncertainties of one-crop grain farming.

On the Ed Hess farm we found a good bunch of Shorthorn cows and also a bull of milking type with plenty of size. This is one of the farms where this kind of cattle have been handled for some time. Lack of labor has been a factor seriously handicapping Mr. Hess. Two silos stood empty, the reason being that it was practically impossible to get the help to fill them. Several other empty silos were observed during the trip, although every man to whom the question was put, replied that silage was the finest kind of feed for cattle. Some were quite positive that the silo was an indispensable feature of handling cattle under the conditions. "We never fail to raise enough corn for silage," said several men.

Livestock Farmers Plan Local Breed Association.

The idea of getting into a good strain of milking cattle seems to have sunk in throughout this community. If it is persisted in and the herds now started are built up and developed along the lines planned, this section will eventually establish itself as a livestock center devoted to the production of milk and cream with hogs and chickens as sidelines, and a gradually increasing revenue from the sale of breeding animals to meet the demand for the right kind of foundation stock to develop this type of farming in the plains region to the east. The old days of the open range and extensive beef cattle production under open range conditions have gone never to return. To take its place must come the diversified type of farming depending on livestock, but handled in an entirely different manner. Milking a few cows will be a feature of much of the diversified farming done on the plains and the community around Bennet and Strasburg will have many imitators. The organization of an association to promote the Shorthorn in the community is now in the process of being formed. This will be an excellent influence for spreading the better livestock idea and the more general practice of the safer type of farming which will be built up around the cow, the sow, and the hen.

Eat More Meat Campaign.

A recent report from the National Live Stock and Meat Board shows that the "Eat More Meat" campaign is getting results. The necessity for this campaign enlisted at the start the unstinted support of government officials, livestock leaders, market papers and the entire agricultural press. This cooperation has made possible the good results which have been obtained. There is a lot of work yet to do and every producer is asked to contribute [illegible] s a car on livestock marketed to he[illegible]nce the work already started.

Getting Rid of Rats.

How to get rid of rats is a problem put up to us by Roy Rasmussen of Kit Carson county. The Rasmussens have just moved into a new place and find it swarming with rats, even the house having numerous runways under the floors. The former occupants tried different poisons, but failed to get the rats. Mr. Rasmussen appeals to us for help.

"Rat extermination is one of the most difficult problems confronting us," writes Joseph Keyes, of the Biological Survey office in Denver. "The rat has proven himself to be the most difficult rodent to poison or trap unless the individual uses his sense of observation and is able to match his wits against those of the rat, as it were. The rat having lived so close to man for the past centuries has acquired a great deal of intelligence that apparently has been passed down through generations. It is necessary, therefore, if one is to be successful in either poisoning or trapping of rats, to understand these points.

"Trapping if persistently followed has proven to be one of the best methods for the control of rats about buildings. There are many devices and makes of traps on the present market which, if properly used, will greatly reduce the rat nuisance. The common ordinary snap trap as sold by local stores for rats is perhaps one of the best and most practical devices. These traps if properly used and exposed are very effective. It is often necessary, however, that several of these traps be used even to catch a single rat. They should be carefully concealed so as not to arouse the suspicion of the rat. It is often possible to cover the trap with light paper or straw in such a manner as to carefully conceal it or camouflage it so that it will not arouse suspicion. In this manner a rat often springs a trap and is caught while making his daily rounds. It is also very effective to place these traps across their trails or at the entrance to their burrows in such a manner that they can not avoid springing the trigger in their passage. It often helps materially if small obstacles, such as a small block of wood or a large rock, are placed in such a position as to make it necessary for the rat to detour. If the trap is properly placed and concealed the rat will invariably stumble into it in his endeavor to avoid the obstacle. The use of several of these traps, some baited and some camouflaged or concealed in the manner described, will greatly improve your chances to catch your rats. You cannot hope to do it with just one single trap.

"The use of poison also is recommended, especially where rats are very numerous and the problem of trapping too great an undertaking, especially under field conditions. In the use of poisons it is first necessary to select baits that will serve as the best medium for poisons. For this reason trial should be made to find out what baits they will eat at a particular time and place. There are many kinds of baits that may be used, grouped under three classes, as follows: Meats, vegetables, and fruits, cereals and other foods. In the meat line, hamburger steak, sausage, fish, fresh liver, broken fresh eggs, bacon or beef are recommended. Under fruits sliced cantaloupe, apple or cucumber can be tried. Green corn, cut from the cob, boiled carrot, and baked sweet potato (mashed) are also good. Other foods that may be tried are toasted bread, cheese, rolled oats and peanut butter.

"The poison that has been found the most practical and most satisfactory is barium carbonate. Barium carbonate is not a very rank poison and can be used and handled without any immediate danger to the hands. Barium, as it is not a very rank poison, has to be used in large proportions, that is, one part of barium to four parts of bait. The barium should be thoroughly mixed through soft baits with the hand or with the spoon. A little water may be added when necessary to make them soft. In the use of sliced baits the barium should be sifted and rubbed into them with the fingers or a knife.

"The bait should be exposed on strips of paper or small shingles. It is highly recommended that one bait each of the above three classes be used, exposed in groups of threes, that is, one teaspoonful of hamburger steak, a few slices of apple and rolled oats placed side by side. In exposing three baits of different nature in this manner the rat apparently is unable to discriminate as to which bait contains poison. He will often pass up one bait in preference to the other, but each of them containing poison he will be unable to discover his mistake until too late. One teaspoonful of each kind of bait is sufficient for each exposure.

"Poison baits should be removed daily and destroyed if they are not eaten. It is necessary that the baits be fresh if it is expected that the rat is to eat them. For any uneaten bait substitute on the following night another from its class. If none are eaten, substitute an entirely new series. Since barium is a very slow acting poison it is seldom that the poisoned animals are found. The only evidence that you have of their extermination is that they fail to again reappear. To set poison in poultry enclosures it is necessary to place all the poison baits under a small box with holes two inches in diameter at each end. This will permit the rats to enter and eat the bait and at the same time protect the poison from your fowls. It is also advisable to place a larger box over the small one with two-inch holes at each end. This will prevent the rats from dragging the baits out and endanger your fowls.

"In all poisoning work there are a few general rules that should be observed. First, remove so far as practicable all accessible foods before poison is used. All baits must be fresh and of good quality. Premises should be inspected each day to remove dead rats and to pick up and destroy uneaten baits. In the use of poisons it can not be too strongly urged that particular caution be taken to keep the poison out of reach of children and irresponsible persons and from domestic animals and fowls.

"It has also been found that these poison baits can be exposed in small paper bags the size of a 5-cent peanut bag. The rat can readily scent the bait through the paper and does not hesitate to tear through and eat of the contents. In this manner it is possible to drop these small bags containing the poison here and there about the premises and they can be readily picked up if not eaten. Labels on the bags will indicate that the contents are poisoned."

Rules for Measuring Hay.

A reader in Jefferson county asks for the Government rule for measuring alfalfa hay in the stack. What is commonly known as the Government rule for measuring alfalfa hay in the stack is to add the width of the stack and the distance over in feet and divide the sum by four. Multiply this result by itself, then by the length of the stack in feet and divide by 512, the number of cubic feet in a ton. While this rule is quite commonly used, more accurate results will be obtained by determining which rule to use depending upon the shape of the stack. By using one rule irrespective of the shape of the stack an error one way or the other of as much as 2½ tons may result on an average-sized stack of eleven and a half tons. The mathematical department of the Colorado Agricultural College has given considerable attention to the working out of rules for measuring hay. These rules are based on the shape of the stack and the suggestion is that the particular rule to use should not be determined until the measurements of the stack have been taken.

If the width of the stack is from one-third to one-half of the over measurement, use rule 1, which is as follows: One-fourth of the over, times the width, times the length, all measurements in feet. Divide this product by 512. In measuring a stack of hay 16 feet wide, 36 feet long and 40 feet over, the solution would be as follows: Forty divided by 4, times 16, times 36 equals 5,760, the number of cubic feet in the stack. Dividing the cubical contents by 512 gives 11¼ tons.

If the width of the stack is more than half of the over, use rule 2, which is as follows: Divide the over measurement less the width by 2 and multiply this result by the width and then by the length and divide by 512. Using the same example as in illustrating rule 1, the solution would be 40, minus 16, or 24 divided by 2 which equals 12, times 16, times 36 equals 6,912, the number of cubic feet in the stack. This divided by 512 equals 13½ tons.

If the width of the stack is less than one-third of the over use rule 3, which is the one commonly designated as the Government rule. In using this rule in the same example the solution would be as follows: Forty plus 16 equals 56, divided by 4 equals 14, times 14 equals 196, times 36 divided by 512 equals 13 25/32 tons. For this particular stack it would appear that the first rule is the proper one to use.

The length of time a stack has stood determines the proper number of cubic feet to use for a ton. For example: In a stack which has stood but thirty days, use 560 cubic feet to the ton; in a stack which has stood sixty days, use 540 feet. If the stack has stood three months use 512 cubic feet; if four months, 485 feet. In measuring hay in the spring use 450 cubic feet to the ton.

Feedlot Disease of Sheep.

With the opening of the feeding season sheep feeders will find it necessary to be on the lookout for Hemorrhagic Septicemia. This disease is caused by a small organism technically known as Bacillis bipolaris ovisepticus. Undoubtedly there are many predisposing causes such as shipping long distances, exposure to cold rains and possibly irregularity in feeding. It seems to be most commonly seen in the feed lots of northern Colorado within two to four weeks after the lambs are placed in the lots, indicating that the shipping was a factor in lowering the vitality, or that the animals became exposed to a virulent infection somewhere in transit. Probably both factors enter into the complete explanation. One spring on the Western Slope many ewes died with typical symptoms of this disease following a cold rain lasting for nine days, indicating that chilling was a considerable factor.

While the disease has taken greatest toll in the feed lots, it is also to be found in ewes in the late winter and early spring, and also in suckling lambs that are born early enough to be exposed to the spring snows. Thin animals appear to develop the more chronic type, whereas the particularly fat animals most frequently show the acute type and die within 24 to 48 hours after the first symptoms are noticed. The chronic type always results in great loss of flesh even though the animals might have been in good condition when the disease began. Apparently there is no difference in susceptibility between southern and northern lambs.

The germ is said to be transmitted from one animal to another by the passing of discharges, particularly the nasal discharge, either into the digestive or respiratory tracts of susceptible animals. It seems probable that public stockyards and cars are a fruitful source for the spread of the disease. After the disease gets started in a flock, it is likely that the feed and watering troughs are the common means of transfer, although in pens sheep are so close together that direct transmission from one animal to another is probable.

A bulletin giving information on the measures to use in preventing Hemorrhagic Septicemia in sheep can be obtained from the Veterinary Department of the Colorado Agricultural College at Fort Collins.

Brine Cure for Meat.

Meat and especially pork can be grown and cured on the farm for much less than it costs to buy meat at the store. Some farmers who have learned how to butcher and cure meat properly find a ready neighborhood market for good cured hams, sides and shoulders. Curing meat on the farm has long since passed the experimental stage. In recent years there has been a tendency to depend more upon the stores, but the need for greater economy is leading many to again take up the practice of curing meat at home.

An old stand-by recipe for brine-curing meat is as follows:

For each 100 pounds of meat use 9 pounds salt; 2½ pounds sugar or sirup, brown or cane; 2 ounces saltpeter; 4 gallons of water. Allow four days cure for each pound of ham or shoulder; three days for bacon and smaller pieces.

The brine should be made the day before it is used, so that it will cool. All the ingredients are poured into the water and boiled until thoroughly mixed. Place hams on bottom, shoulders next, bacon and smaller pieces on top. Pour in the brine and be sure it covers the meat thoroughly. In five days pour off the brine and change the meat. Place the top meat on the bottom and the bottom meat on top. Repeat this operation again on the tenth and eighteenth days. If the pickle becomes ropy take out all the meat, wash it, scald out the container, and boil the brine, or better yet make new pickle. When each piece of meat has received the proper cure take it out of the pickle, wash it in lukewarm water, string and hang it in the smokehouse. Smoke the meat until it has a good chestnut color.

For smoking use hickory, or any of the hard woods, or cottonwood and aspen, or aspen and willow. Corn cobs are good, but do not use any of the resinous woods.

Bartholomew Heads Farm Machinery Association.

There are more than 500 factories in the United States making farm implements. It is estimated that the value of the production of agricultural implements in 1920 amounted to $536,945,000. Efficient farm machinery has been an important factor in the phenomenal development of American agriculture. The American farmer from the standpoint of production to the man is the best farmer in the world. Improved machinery which constitutes something less than 10 per cent of his total annual expenditures according to the report of the Joint Commission of Agricultural Inquiry, has been largely responsible for this efficiency in production which has been the wonder of the world. It can readily be seen why farmers are so

J. B. Bartholomew, newly elected president of the National Association of Farm Equipment Manufacturers.

vitally interested in the farm machinery industry and all the various factors affecting the cost of manufacturing implements and delivering to him these tools of his industry so essential to his success. Despite the high cost of farm machinery it is interesting to learn as a result of the careful investigations of the Inquiry Commission that the peak prices on agricultural implements over those of 1913 and 1914 were but 75 per cent, while wholesale prices on all commodities reached a peak of 172 per cent over 1913 and 1914 prices.

One of the outstanding men of the agricultural machinery industry is J. B. Bartholomew of the Avery Company, who has just been elected president of the National Association of Farm Equipment Manufacturers. Mr. Bartholomew's career in this industry began when he as a boy on his father's farm near Elmwood, Peoria county, Ill., became an expert on the threshing machines operated. His father was the first purchaser of a straddle-row cultivator and harvesting machinery of the hand-rake type and other new machinery as it became available up to and including the evolution of the modern twine binder. He made himself familiar with the mechanical upkeep and operation of all these new machines and when the first steam tractor engine came in 1879 he was with it the whole summer, being present at every threshing bee in the neighborhood in a practical capacity. At the age of sixteen he began his career by getting a job in the manufacturing end of the business and has been with the same firm ever since, steadily climbing upward until he heads the concern.

Mr. Bartholomew has taken out so many patents that the United States Patent Office recently issued a book of several hundred pages explaining inventions taken out in his name. This book does not contain all his patents and there are probably enough more to fill another larger book. Mr. Bartholomew has probably given more to the agricultural implement industry in the way of new inventions and improvements than any other man connected with the industry at the present time.

Numerous requests for feeder hogs in carlots are coming to the State Farm Bureau office from farmers in Nebraska and Iowa. They prefer hogs immunized against cholera and are asking for prices on feeders weighing from 60 to 150 pounds a head. Farmers having stock hogs for sale are asked to report to the State Farm Bureau office in Fort Collins.

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The Rural Household

Questions about home problems promptly answered by letter and through the magazine. Letters from women containing helpful suggestions for improvement of rural life are always welcome. Address all communications to Mary G. Collopy, Editor Home Department, Western Farm Life, Denver, Colo.

Thankful or Not?

Would you be ungrateful?
'Tis an easy way;
Think of yourself, and self alone all day;
Think of your pain, your grief, your loss, your care.
All that you have to do, or feel, or bear;
Think of your good, you pleasure,
And your gain,
Think only of yourself, 'twill not be in vain.

—M. G. C.

My Neighbor's Story.

She called on me the other day—this neighbor of mine. We talked about Thanksgiving Day. We didn't talk about turkey or cranberries either; perhaps because we are both invited out this year. But we did start in just as children who ask "What did you get for Christmas?" We asked each other, "What am I thankful for?" She told me that I might repeat this part of her Thanksgiving.

"I'm thankful that my country is not at war; that God sent one of my sons home from France and that He has given me faith sufficient to bear the absence of the other."

"I am thankful that my community is growing bigger and better—that there is less of religious prejudice, less of slander and gossip, and more of the spirit of shoulder-to-shoulder for the good of all."

"I'm thankful for the love of a good husband and confiding children."

"I'm thankful that, in spite of crop failure, and low prices, my family is looking forward to better returns in 1923."

"Most of all, I'm thankful that I am alive and able to fill my post of duty in my home from day to day."

Suggestions for Thanksgiving Dinner.

Autumn leaves used as a centerpiece are just as attractive this year as ever. If you live in a community without trees you surely can find a pumpkin. A pumpkin cut in the shape of a coach drawn by chocolate mice, makes a splendid color scheme. The "coach" may be filled with fruit or nuts. Another pleasing idea can be carried out with the help of the children. Fill a pumpkin bowl full of walnut fortunes. Break the walnuts into halves, remove the nut meats and fill the space with tiny folded notes containing a written fortune. Before glueing the shells together, insert one end of an orange baby-ribbon, allowing streamers of ribbon long enough to reach out to each plate. Then press the parts of the shell together and allow the glue to dry before heaping the nuts into the pumpkin. If you have only a few guests your "fortune nuts" will be placed among the nuts which fill the bottom of the pumpkin. At the close of the meal each guest draws out his fortune and reads it aloud.

Crepe paper pumpkin blossoms are easily made by cutting circles of orange or yellow crepe paper eight inches in diameter. Use a plate to cut your pattern. Simply crumple the circle in your hand and partly shake out. This gives the effect of pumpkin blossoms. If you care to have these hanging from your chandelier or hanging-lamp, attach the blossoms to cord or fine wire and cover the stem with green paper.

Perhaps you plan a separate table for the children. Crepe paper table cover and napkins save much washing, as you know.

Place cards can be made by the children—cardboard pumpkins with name written in black ink can be made in a very few minutes.

The following is a suggestive menu for the Thanksgiving Dinner:

Fruit Cup or Cocktail (Grapefruit and Orange).
Clear Soup.
Celery. Relish.
Roast Turkey with Dressing.
Cranberry Frappe.
Turnip Cups. Potatoes.
Tomato Jelly Salad.
Cheese Straws.
Pumpkin Pie with Whipped Cream.
Coffee.
Nuts. Mints.

The following recipes are used in the preparation of the menu suggested:

Turnip Cups—Pare and cook turnips until tender. Remove and drain. Scoop out center and fill with creamed peas or buttered carrots. Beet cups may be made in the same way. Centers may be cut out either before or after cooking the vegetable.

Tomato Jelly Salad—Two cups stewed tomatoes; 1 cup water or meat stock; 2 tablespoons vinegar; 1 teaspoon chopped onion; 1 teaspoon salt; ¼ teaspoon pepper; few grains cayenne; 2 tablespoons gelatine; ⅓ cup cold water; ¾ cup dressing; 6 lettuce leaves.

Combine all ingredients except gelatine, water and dressing. Bring them to the boiling point and rub through a sieve, then soften the gelatine in cold water and dissolve it over hot water. Combine the two solutions and turn mixture into molds; arrange later on lettuce leaves and garnish with dressing. A pleasing variation is made by adding chopped olives or diced hard boiled eggs to mold.

Cranberry Ice—One quart cranberries; 2 cups water; 2 cups sugar; juice 2 lemons. Cook berries and water 10 minutes, then rub through a sieve; add sugar and lemon juice and freeze.

Cheese Straws—One-half cup cheese; ½ cup coarse bread crumbs; ⅓ cup flour; 2 tablespoons butter; ⅛ teaspoon salt; ⅛ teaspoon pepper; few grains cayenne. Roll and cut into thin strips about 6 inches in length and bake.

What Does Your Hair Mean?

What does your hair mean to you? Is it something which has to be hastily pinned back when you arise and never thought of again until you have that spare minute late in the afternoon? Is it a bother or is it an asset to your appearance?

There are many women who will say, "I have more important things to think about than my hair. I have no time to bother with it." But this woman hasn't paused to consider how pleased her husband would be to see her hair carefully arranged as well as combed; how much more careful the average man is of his hair than is the average woman; how her good example would serve as inspiration to her girls. We are all guilty of neglect at some time or other.

How many times have I heard women say: "My hair is so dull and broken that no hat looks well on me." Or another: "My son wants me to have my photograph taken, but I can't look like anything with this little wisp of hair."

But there are many, many women who are anxious for hints on proper care of the hair. For them we shall pass on these few suggestions:

Every woman, old or young, poor or rich, owes it to her husband, to her children, and to her community, to look her very best at all times.

Massage your scalp, with your finger tips, every time you think of it, but especially at night. Begin at base of your head in the back and work forward moving the scalp with thumbs and middle fingers. This is so much better than just surface rubbing. A loose scalp sends blood to the roots of your hair, giving hair life and color.

In brushing your hair use a narrow brush which will work into the scalp as the hair is divided into parts. Brush your scalp as well as your hair.

Begin combing at ends of hair, working up gradually.

Worn, bent wire hair pins often break the hair, especially when carelessly "stuck" into the hair.

Do not shampoo oftener than twice each month is the advice of well trained hair dressers.

For shampoo, always use a pure white soap of castile variety. Shave the soap and melt it in water until completely dissolved. Never rub the bar of soap directly on the hair.

Rinse your well brushed hair before you add the lather of soap. This is a warm rinse but it removes much dust and gives the lather a better chance.

Give at least two distinct applications of the lather, rinsing after each time. Rub scalp as well as hair.

Rinse! Rinse! So few of us actually remove all the soap from our hair. If necessary add a little strained lemon juice or one tablespoon of vinegar to free the soap. Hard water shampoos require the addition of these common acids.

If you are blessed with running water and a bath tub you will want to save money enough to buy a bath spray to attach to the faucet. Kneel by the tub

and spray your hair thoroughly. This gives the ideal rinse.

An oil shampoo is so very beneficial, especially for oily hair, that I must mention it. Use equal parts of castor oil and pure olive oil; heat and rub well into scalp with a bit of cotton or a tiny rag. Let this remain in the hair over night. Before shampooing, wring a bath towel out of hot water and steam your head, then apply soap lather without any previous rinse.

Our Fashion Service.

All patterns 12 cents each. Address Western Farm Life, Pattern Department, 1513 Court Place, Denver, Colo.

Read This Before Ordering: Patterns ordered through this magazine are mailed promptly from the factory at Brooklyn, N. Y., and arrive in 10 to 12 days from time order reaches Western Farm Life. Be sure to specify size and number of patterns. Write your name and postoffice address plainly to avoid delay. These patterns are handled at cost, as a service to our women readers. The price of 12 cents includes postage.

4161—For Porch or Kitchen Wear. Trim and neat is the style here portrayed. The development and adjustment are equally simple. Figured percale was used in this instance, combined with white linene The pattern is cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires 5 yards of 40-inch material. To make vest, collar and cuffs of contrasting material requires 1¼ yard. The width at the foot is 2¼ yards.

4158—A Popular Day Dress. A frock of this kind is neat and chic, and simplifies the work of the woman who makes it. The model is in "slip on" style. The bell-shaped sleeve is comfortable and up-to-date. Plaits at the side seams give added fulness to the skirt portions. This pattern is cut in seven sizes: 36, 38, 40, 42, 44, 46 and 48 inches bust measure. A 38-inch size requires 3¼ yards of 54-inch material. The width at the foot with plaits extended is about 2¼ yards.

3930—A Popular Style. Here is ease and convenience for a "little" person and quite the latest fashion whim—to "wrap" your dress about you and go about it without "mussing up your hair." The basket pockets will be attractive, and are useful too. This style is good for repp, linen or gingham. The sleeve may be in wrist or elbow length. The pattern is cut in four sizes: 4, 6, 8 and 10 years. A 6-year size requires 2¼ yards of 32-inch material.

4152—A Stylish One-Piece Model. Serge and plaid suiting are here combined. The fronts meet over a panel. The sleeve is in bell style. This model makes a splendid school dress. The pattern is cut in four sizes: 6, 8, 10 and 12 years. A 10-year size requires 2¾ yards of 44-inch material. To trim as illustrated will require 1 yard of 32-inch material.

4100—A Splendid Model for General Wear. Here is a roomy, comfortable top garment, good for traveling, motoring or street wear. It may be made of caracul or other pile fabrics, as well as of tweed, mixtures, velours and similar cloakings. The pattern is cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size will require 5½ yards of 44-inch material.

4143—A New Suit for the "Little Man." Real sportsman-like is this model, with its sailor collar and straight trousers. Khaki, linen, drill, serge or tweed, as well as corduroy, seersucker or galatea are serviceable materials for this design. The pattern is cut in four sizes: 3, 4, 5 and 6 years. A 4-year size requires 2 yards of 44-inch material. To trim with contrasting material as illustrated will require ⅝ yard of 32-inch material.

4140—A New Play Dress. Here is a smart romper fashion with added "dress sections." The sleeve may be finished in wrist or elbow length. The rompers are finished with a drop back, which is buttoned to a long waist portion. The pattern is cut in four sizes: 2, 4, 6 and 8 years. A 4-year size requires 3¼ yards of 32-inch material.

3895—A Popular One-Piece Dress. Here is a splendid style for remodeling or for combining two materials. The lines are good and youthful, and new style features are seen in collar and sleeve. Satin or taffeta would be attractive for this design with soutache braid or embroidery for trimming. It would also be nice in black velvet with braiding, or in taupe moire with a touch of coral. The pattern is cut in three sizes: 16, 18 and 20 years. A 16-year size requires 4½ yards of 36-inch material. The width of the skirt at the foot is about 2 yards.

The Farm Woman's Servant.

Ever since inventors began to turn their attention to devices for making life easier and lessening the work of the housewife by electrical machinery, the farm woman has had one more cause for envying her city sister. In the cities the housewife in most instances had available electric power for operating these household helpers, such as the washing machine, the sweeper, the toaster, percolator, and even the curling iron.

Some farm homes have been equipped with individual home lighting plants, but these represent only a small portion of the farm homes of the country. In a few favored localities electric power lines have been extended out into the country districts, carrying the convenient light that turns darkness into day and relieves the farm woman of much of her drudgery and so brightens the surroundings that she radiates greater joy and gladness.

One such community is the Salt River Valley of Arizona. This is an irrigated region, the water for which is obtained from the reservoir formed by the Roosevelt Dam built by the U. S. Reclamation Service. This dam was built in the mountains at the junction of two streams. Power plants have been built at the dam and at various points on the canal. The power thus developed is used to operate the machinery at a number of large mines, and is also used for light and power in the towns of the Salt River Valley, and last and most interesting of all, for carrying the conveniences of the city home to the farms.

Here the farmer has the unique experience of using the water twice. Today he may put the same water on his land to grow his crops which yesterday, far up the canal, developed the power that pumped the water for domestic use, did the family washing, miked the cows, or last night lighted the home and the stable.

For the past few years the farmers who have operated the irrigation system, through their own association of water users, have been gradually extending electric lines throughout the farming area. Groups of farmers form an electric district within the irrigation project, which covers 300,000 acres. The district is then equipped with transformers, distributing lines from the main power lines and other necessary equipment, the work being done at cost by the parent association. Power is supplied at a very reasonable rate, enabling the farmer to have the luxury of lights, and his wife the convenience of power appliances cheaper than city folks.

The power lines in many cases parallel the wonderful paved roads, the $10,000,000 system which is now nearly completed, and which puts almost every farm in the Valley on a paved road or within a mile of one.

Good November Food

For Men on Farms

The reading of newspapers and farm journals in easy chairs calls for different kinds of food than plowing days require.

Inactivity is particularly the foe of good health on the farm.

You need foods then that tend to do what exercise does during busy times.

Stewed Raisins are luscious and effective

Stewed raisins served with cream is a most delicious breakfast fruit-dish, and one that brings real winter benefits.

Eat them frequently when exercise is lacking. For raisins are 75 per cent fruit sugar in practically predigested form.

Stewed Raisins

One package Sun-Maid Raisins; 1 slice orange or lemon rind; 2 cups cold water.

Put raisins and water in sauce-pan and bring to boiling point. Add slice of orange or lemon and cook for 30 minutes. Sugar may be added, but is not necessary. Stewed raisins being very rich should be served in small portions.

Sun-Maid Raisins should cost you no more than the following prices:

Seeded (in 15 oz. blue pkge.)—20c.

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Red package (Seedless), best for stewing.

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Raisins furnish food-iron also—fine food for the blood.

You need but a tiny bit of iron daily but that need is vital. Stewed raisins will help you get your daily portion of it in a most attractive way.

The fact is, you will like this dish so well that it will be your regular morning fruit-food the year round.

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Use of "Scent Baits" in Trapping.

With the supply of fur-bearers becoming gradually less plentiful in most sections of the country, each year, it is necessary for the trapper to use every possible means of enticing the animals to his traps if he is to enjoy the full fruit of his labors. During the past few years a number of new methods and devices for fur trapping have been brought into use with varying degrees of success. One of these is the use of a scent, or liquid bait in connection with the meat or other baits used in making the sets.

While the effectiveness of scent baits has been belittled by rather a large number of trappers, others are strong in their praise of it as a fur getter, especially when properly used. During some ten years of personal experience, and association with other trappers on the trap line, I found the use of scent bait of much practical value in making larger fur catches, providing a reasonable amount of care is used in placing it. I have used no less than a dozen different brands of liquid animal baits, including some of my own manufacture, all of which I found of practically equal "drawing" power.

The cause of disappointment in the use of liquid baits is mainly due to a misunderstanding of how they should be used. The practice of putting the scent directly upon a small stick, or on the meat bait, as is almost universally advised by bait manufacturers, is almost entirely worthless, in my experience. The greatest neutralizer of liquid bait is moisture, and when the bait is applied to a meat bait the natural moisture contained therein will, in a few hours, entirely kill the scent bait. When placed on a stick the dampness of the ground will quickly neutralize the luring effects of the bait.

In order to make your use of liquid bait of value to you it should be put on a small piece of cotton. Take a piece of ordinary cotton about the size of a hazel nut and saturate it thoroughly with the scent, after which it should be placed in such a way that no moisture, either from the ground or from storms, will reach it. In trapping muskrats and other water animals, the cotton can be tied to the end of a stick and placed directly over the trap, while if you are making a set for small land animals the scented cotton must be placed between two pieces of flat, dry wood.

In making sets for wolves, coyotes, wildcats and other larger animals, the best results are obtained by placing the cotton in a small slit in a tree near your set. This can be made with your hunting knife, cutting from the bottom up. This will hold the cotton securely, while the flap will protect it from all moisture and storms. The slit should be made about three feet from the ground.

The above method of using liquid baits was discovered only after much experimenting and has been found to be far the most satisfactory of all, both in my own trapping experiences and those of fellow trappers. It has proven a boon to many an amateur trapper, and by adopting its use you will most surely have the satisfaction of much larger catches, and especially if you live in a snowy locality where trapping is always a more difficult undertaking than trapping on bare ground.—Emil C. Wahlstrum.

Leather From Your Own Hides.

There is a constant call for good repair leather on every farm and ranch. Hardly a day passes but what some repairing in which leather is needed is to be done. However, a great many farmers try to get along without the needed leather, or continue to pay the high prices asked for leather when they could have a plentiful supply for all purposes, and at a reasonable cost, by having their own hides tanned.

The tanning charges on a good sized horse or cow hide is only $4 or $5, while the same amount of leather would cost from $20 to $30 if purchased in the stores. By having two or three of the hides from your butchered stock tanned into leather you will have a supply to last an entire year, and at the same time have the satisfaction of always having a piece of leather at hand when needed.

Also, there is nothing better for a coat or robe than a good, well-haired horse or cow hide tanned and lined, leaving the hair on. Animals killed in the spring and summer make the best leather, as the hide is thicker at those seasons of the year, while hides taken in the fall and winter make the best coats and robes, as the hair is longer and heavier then. A coat or robe can be had made and lined for from $10 to $15 by most reputable tanners, and after the job is done you will have an article worth many times its cost. With a good cowhide coat and robe your early morning trips to the milk station this winter will be comfortably made.

Take a look about your premises and see if there are not two or three hides going to waste which can be converted into needed leather or neat fur garments.—Emil C. Wahlstrum.

Market Outlook for Farm and Ranch Products.

(Continued from Page 6).

190,000,000 bushels, which is less than last year. Italy has been buying Manitobas in the last few days for the first time this season, as the advance in exchange made American wheat about 15 cents cheaper to them. Germany seems to have assembled funds for buying food and France will begin to provide for her most urgent requirements as soon as the reparations problem can be settled in some manner.

Supplies are not apt to come forward in North America more rapidly than they are now doing, even if the car shortage is relieved, as it is past the season for big runs of wheat in the United States and there is little evidence that the rail situation has caused clogging up of country elevators. In fact, some sections report that holdings in such positions have been largely sold to mills. Primary markets received in the first four months of the wheat year 202,145,000 bushels, compared with 232,279,000 bushels last year, but the ten-year average is only 172,346,000 bushels. In this interval the accumulation at terminals was only 15,790,000 bushels, against 46,272,000 bushels last year, and a ten-year average of 49,062,000 bushels. From this time on the weekly supply usually dwindles and can be expected to do so this year even if the car situation becomes easier.

Canadian farmers have marketed already 190,000,000 bushels, the largest for the period on record. Canadian receipts in November usually run about as heavy as October, but as heretofore, port facilities will limit the amount which can be placed on the European market and in another five weeks the close of navigation will seriously reduce the movement to the seaboard.

Canada has piled up a rather large visible supply, but the accumulation has been small alongside of the total receipts. In the United States the visible supply is about 60 per cent of that of last year and the smallest on November 1, with two exceptions, in a dozen years, in spite of the fact that sales from farms from July 1 to September 30, as estimated by the Department of Agriculture, were 50.1 per cent of the crop compared with 57 per cent last year, and 41.1 per cent two years ago. The movement this year is above the average of the war years also.

Rains in the Southwest have soaked some of the dry spots, but the crop has obtained a late start and private reports point to a decrease of about 10 per cent in the acreage, the reductions being greatest in Nebraska, Oklahoma and Texas. The rain is too late to correct the condition entirely, although it will sprout some of the grain sown in the dust.

Rye Exports Look Promising.

Large sales of rye to Germany have been made recently and reports from that country indicate that the native crop is a great disappointment both in yield and quality. Exporters are confident that practically all of the big surplus in the United States and Canada will be wanted. Out of a surplus of 55,000,000 bushels in this country about 19,000,000 bushels had been cleared before October 1.

Unusual Strength in Corn Position.

Unofficial reports show a farm carryover of old corn of approximately 168,000,000 bushels, and a new crop of 2,796,000,000 bushels, making a total supply including visible stocks at terminals of 2,973,000,000 bushels, compared with 3,385,076,000 bushels a year ago, a decrease of 412,000,000 bushels, or 12 per cent. Furthermore, the total supply this year as shown by these unofficial reports is 235,000,000 bushels less than the amount which disappeared into consumption in the last twelve months, and only 136,000,000 bushels, or approximately a normal carry-over, in excess of the ten-year average disappearance. Since the number of hogs, beef cattle and dairy cows to be fed is above the average, and since exports promise to hold above normal, the demand in the next twelve months threatens to outrun the supply. As a partial offset to these

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conditions, the quality and feeding value of this year's crop is much better than that of last year.

Cash Grain Markets.

The range of cash grain prices are as follows:

Kansas City—Wheat, No. 2 red, $1.18 @1.19; No. 3, $1.12@1.17; No. 2 hard, $1.14@1.24; No. 3, $1.13@1.23.

Corn—No. 2 mixed, 71@74c; No. 3, 73c; No. 2 yellow, 71½@75c.

Oats—No. 3 white, 44¼@45½c.

Seed Market Gaining.

The seed market is gradually advancing, with timothy especially showing a sustained upward trend. Receipts are fairly heavy, but the demand is ample to absorb them. The tariff has practically shut off imports of European clover seed.

Hay Market Slightly Easier.

Receipts of hay have increased slightly and the market shows an easier tone as demand remains limited. Supplies in the surplus sections are large, but high freight rates restrict shipment and the trade is apt to remain mostly a local affair as it has been for the last eighteen months.

Kansas City—Prairie upland No. 1, $15@15.50; No. 2, $13@14.50; alfalfa, choice $24.50@25.50; No. 1, $23@24; standard, $19@22.50; No. 2, $17@19; No. 1 timothy, $14.50@16.50; No. 2, $12 @13; No. 1 light clover mixed, $14.50@ 15.50; No. 1 clover mixed, $12.50@14; straw, $8.50@9.

Fresh Eggs Extremely Scarce.

Fresh eggs are becoming more and more scarce on the leading markets and a further advance in values occurred last week. During the next thirty days the season of greatest shortage will be encountered.

Receipts of poultry are running above the average for this time of year, but the rate of consumption also is above the average and storage stocks of frozen poultry are accumulating very slowly. The increase in holdings at the four leading cities during October was only 16 per cent of that of last year.

Latest quotations:

Kansas City—Eggs: Firsts, 36c; seconds, 24c. Live Poultry—Broilers, 21c; springs, 14c; heavy hens, 18c; light hens, 13c; roosters, 10c; turkeys, 30c; ducks, 18c; geese, 8c.

Denver—Eggs, 32c. Live Poultry—Hens, 20c; springs, 17@18c; broilers, 22c; roosters, 7c; turkeys, 27c.

Another Advance in Butter.

Butter prices advanced again last week as the supply on the leading markets declined and consumptive demand remained strong, although a part of the consuming public is turning to substitutes. Medium and undergrades improved even more than top scores.

Prices for 92-score fresh butter on November 3 were as follows:

Chicago, 48½c; New York, 49½c; Boston, 48c; Philadelphia, 50c.

Potato Market Glutted.

Potato markets have been glutted during the last two or three weeks and extremely low prices have prevailed. During the next month, however, a decrease in shipments from producing sections of 50 per cent or more can be looked for confidently and values as a result are apt to recover sharply. Large quantities are being left undug and a period of cold weather would enhance prices sharply by destroying unharvested potatoes and causing heavy losses of shipments in transit, practically all of which are now moving in ordinary box cars. Northern sacked round whites are quoted at 85 cents to $1.25 on Mid Western consuming markets.

The First American.

(Continued from Page 10.)

"You shall face him," assented Richelieu with sudden solemnity.

"Where? When?" demanded the marquis.

"A day or so hence. In the next world, whither he has just preceded you."

"Your eminence!" panted the doomed man, "I——"

"The marquis," said Richelieu, again addressing me, "had greater temptation than assails most men. The reward promised him was high. Nothing less than the hand of my god-child, Mlle. Claire de Sieux."

I felt myself redden. The cardinal eyed me with that odd, quizzical glance of his; then resumed:

"It was well planned. The duke had won the Chevalier de Sieux over to his side. He had promised him a marquisate if the chevalier would give him his daughter—and his daughter's dowry—to the man who should heroically rid France of Richelieu the tyrant."

"No! No!" babbled Des Ems incoherently, wringing his hands.

"The chevalier was greedy for rank commensurate with his wealth. The only proviso he made was that his future son-in-law should also be a man of high rank. On slaying me, Des Ems was to go directly to the chevalier and claim his reward. He was unknown, personally, to De Sieux, who mingled little in court life of late years.

"And a letter would be too dangerous in case the exploit should fail. So it was arranged that Des Ems should take the ducal snuff-box from my body and present it to the chevalier; not only as guaranty of his identity but as proof positive that the deed was done and the reward earned. Does this story interest you?"

"It—it—I begin to see, at last! The chevalier thought I was——"

"Can you not imagine his rage when his daughter's perverse refusal to marry you robbed him of a marquisate and a titled son-in-law?"

"But the picture—the—"

"The miniature in the box's lid? Placed there by the chevalier that the son-in-law-elect might see how fair a wife he was to earn. To your provincial brain the whole affair has no doubt a very pretty mystery. To a diplomat it was as plain as the alphabet."

The valet de chambre, who had left the room, now appeared. Richelieu questioned him with his eyes. Laroque bowed and withdrew.

"Monsieur le marquis," said the cardinal, turning to the dazed, sullen Des Ems, "I have a pleasant surprise for you. It seems we are to be a very jolly little family party. The Chevalier de Sieux has just been announced. Knowing how glad you would be to see your future father-in-law, I ventured to send for him."

The valet de chambre came again to the doorway. Standing at formal attention, he announced:

"The Chevalier de Sieux!"

The old man entered the room with a truculent air not unlike that which Des Ems had worn on his arrival. The thick lips were parted in angry protest when, before the words could be spoken, the newcomer chanced to see Des Ems.

The marquis' attitude, his twitching face, the craven, hopeless fear that leaped from his eyes—all told their own story; far more eloquently than could mere speech.

(Concluded in next issue.)

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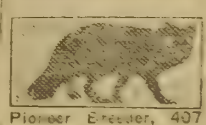

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Common light steers	4.25@ 6.00	4.15@ 6.35	5.00@ 6.75
Common to choice butcher heifers	3.50@ 5.25	3.75@ 8.75	4.00@ 9.00
Common to choice butcher cows	3.00@ 4.75	3.25@ 6.15	3.50@ 6.50
Bologna and beef bulls	2.25@ 3.00	2.85@ 4.75	3.00@ 6.00
Canners and cutters, cows and heifers	1.50@ 2.75	1.75@ 3.25	2.25@ 3.50
Canner Steers	2.00@ 3.00	2.00@ 3.50	2.50@ 4.00
Medium to choice light veals	7.00@ 9.00	6.25@10.00	7.50@10.00
Common to choice heavy veals	4.00@ 7.00	3.00@ 7.00	4.50@ 8.00
Common to choice feeders (1000 lb. up)	4.50@ 7.25	5.00@ 8.25	5.25@ 7.75
Common to choice feeders (750-1,000 lb.)	4.50@ 7.25	5.00@ 8.15	5.00@ 7.85
Common to choice stocker steers	4.00@ 7.00	4.00@ 8.10	4.75@ 7.30
Common to choice stocker cows and heifers	2.75@ 4.00	2.75@ 5.75	3.25@ 5.50
Hogs—			
Top of Market	$ 8.70	$ 8.25	$ 8.25
Bulk of Sales	7.50@ 8.25	7.50@ 8.20	6.85@ 8.10
Heavy (250 lb. up)	7.00@ 8.25	7.40@ 8.15	7.35@ 8.15
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Light (150—200 lb.)	7.65@ 8.70	7.55@ 8.25	7.50@ 8.15
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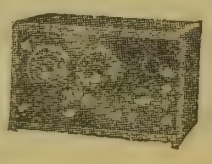

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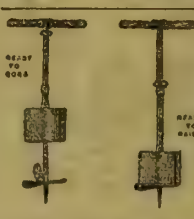

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A crude oil shampoo will rid hogs of lice. Give it to them from a rubbing post. Wrap a post with burlap sacks and soak the sacks with oil every few days.

Cows that are in good condition when they freshen are best fitted to do their year's work in milk production. They start with a greater milk flow and milk longer than those starting their lactation period in poor condition.

The highest producing dairy cows are found in sections having the highest percentage of purebred dairy bulls. In making an analysis of census figures on this point the forty-eight states were divided into groups of twelve states each on the basis of the purebred sire percentages. It was found that the top group on the purebred sire basis was also the leading group in average milk yield. On through the classification the average milk production for the groups fell off as the percentage of purebred bulls decreased. This is but another evidence that it pays to keep animals of improved blood.

Selecting Herd Boar.

It will soon be time to breed the sows for the spring litters. If you bought the boar you knew you would need early in the fall you probably got a much better choice than it is possible to get now. No statement is more true than that "A good sire is half the herd, but a poor sire is all of it." Keep this in mind in buying your boar. If you are not using a boar better than your brood sows you are going backwards. "In selecting a boar," says Harry H. Smith of the Colorado Agricultural College, "three things should be considered, individuality, breeding, and if a mature animal, his offspring. In considering the individual, of course type, quality, bone, masculinity and size for age are the main things to consider. The prospective purchaser should always insist on seeing the sire and dam and as many of the close relatives as possible. By so doing, one gets a good idea of what he can expect from the boar when he is mated to suitable females. Of course, the surest buy is the aged boar that has been tried and in considering him, one should always insist on seeing as many of his offspring as possible. Here one has a sure check of what the boar will do."

Tuberculosis Eradication Stimulates Dairying.

That the free and frank discussion of bovine tuberculosis in its relation to milk supplies benefits rather than injures the dairy industry is shown by observations of the United States Department of Agriculture. When the work of freeing dairy herds from tuberculosis on a wide scale was undertaken several years ago, critics advanced the belief that the slaughter of tuberculous cattle would result in a milk famine and that publicity calling attention to the disease among dairy cows would hurt the dairy business.

The criticisms received careful consideration, but were not permitted to interfere with the constructive program of tuberculin testing and freeing herds from the disease. The soundness of this policy is shown by the following figures: During the period July 1, 1917, to July 1, 1922, 175,000 tuberculous cows were destroyed. Instead of a milk shortage there has been a remarkable increase in both production and consumption of milk and dairy products. Last year, 1921, milk production in the United States aggregated nearly 99 billion pounds, a noteworthy gain over the previous year. Production of butterfat likewise increased. In 1921 alone, milk cows increased 341,000, which is a figure nerly twice as great as the slaughter of tuberculous cattle during the entire five-year period.

Several hundred towns have issued regulations requiring tuberculin testing, and apparently with inspired faith in the safety and value of milk as a food, people are using more of it than at any time in the past. Frequent instances are reported to the Department of Agriculture in which parents place liberal milk orders with owners of tuberculin-tested herds a considerable distance away, although they could obtain milk from untested herds much more conveniently and at a lower price. Thus, in spite of various objections to the free discussion of tuberculosis-eradication problems, the evidence shows that the benefits outweigh the doubts and fears.

Dairying Certain to Increase.

Dairying as an industry viewed from any angle is bound to increase. The development of dairying in a community adapted to this type of livestock production has a stimulating effect aside from its economic aspects for the reason that it calls for a high type of intelligence and brings out the best that is in a man.

It is true that dairying has been avoided by many because of the so-called drudgery which is generally associated with milking cows and marketing the product. This is becoming less and less a condition associated withthe business. Mechanical appliances, such as the cream separator, the milking machine, modern barn equipment, etc., now enable the dairy business to be conducted on just as efficient and pleasant a basis as any other business. In fact, it can be said that the dairy business can now almost be put on a machinery basis, and the arduous hand labor practically eliminated. This will undoubtedly attract a great many to the dairy cow who have heretofore held aloof.

Are You a Dairy-Minded Man?

In successfully managing a dairy herd, the man is the first essential. No matter how favorable conditions may be or how good the markets, the man must at heart be a "dairy-minded man" or the profits will not be what they should.

The right kind of cows are indispensable and the proper kinds of feed are a necessity, but both would fail to bring the desired returns if the man behind them failed to give the proper care and management. Cows of quality must be fed milk-producing feeds in sufficient quantity. A stingy woman is a poor cook, and a stingy man is a poor dairyman.

The "dairy-minded man" learns how to know his cows—their likes and dislikes, their needs and what is hurtful to them. A cow that gives a large quantity of milk is often notional and has petty whims about the way she wants her feed arranged and the way she is milked. An increase in yield is often secured by humoring these whims.

The "dairy-minded man" loves his cows. He makes pets of them and thereby increases his pleasure in caring for them and increases his bank account at the same time. He strives to give them the care of a mother and furnishes them shelter in winter, shade in summer, water and salt at all times. He does everything necessary to make them comfortable. The dairyman that does all of these things is a "dairy-minded man" and you will know him by his success in the dairy business.—J. E. Dorman.

Bringing Jersey Cow to Her Milk.

We have a fine Jersey cow that freshened the last of August. She calved some days before her time and has not come to her milk. We are afraid she is going to go dry. We feed her a five-gallon can full of canteloupe hulls mixed with bran morning and night and all the corn fodder and alfalfa she will eat. She refuses to eat any of the alfalfa, however. Is there anything we can do to bring her to her milk?—G. C. W., Otero county, Colo.

You failed to state whether this cow had a dry period of six to eight weeks or whether she gave milk right up to freshening time. Jerseys sometimes do this and when they freshen without having a resting period they do not come to their usual milk flow. I have no information on the feeding value of canteloupe hulls. They are probably rather low in actual nutrient value. It seems rather unusual that a cow will not eat alfalfa hay. There is no roughage equal to it as a milk producing feed. Try and get her to eating alfalfa if possible. She might eat some hay of different qualities than has been offered her. Usually cows like the later cuttings of alfalfa which contains large quantities of leaves and fine stems. Try as a grain ration a mixture of equal parts oil meal, bran and ground oats. This is an exceptionally good combination for getting a cow into good condition and stimulating milk production.—G. C. W.

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NATURAL LEAF TOBACCO—CHEWING, 5 LBS. $1.75; 10 lbs., $3. Smoking, 5 lbs., $1.25; 20 lbs., $3.50. Send no money. Pay when received. Tobacco Growers' Union, Paducah, Ky.

TOBACCO — THREE-YEAR-OLD KENTUCKY leaf; pay for tobacco and postage when received; 3 lbs. chewing, $1; 4 lbs. smoking, $1; 7 lbs. No. 2 smoking, $1. Kentucky Tobacco Assn., Hawesville, Ky.

HOMESPUN TOBACCO—CHEWING, 5 POUNDS, $1.75; 10 pounds, $3; 20 pounds, $5. Smoking, 5 pounds, $1.25; 10 pounds, $2; 20 pounds, $3.50. Send no money, pay when received. Co-Operative Tobacco Growers, Paducah, Ky.

Profitable Farm Poultry

PAUL C. JAMIESON.

Inquiries on all phases of poultry production promptly answered by mail. Letters telling of your experiences and successes always welcome. Address all communications to Poultry Department, Western Farm Life, Denver.

Young cockerels being kept for breeders next spring should be yarded by themselves and not allowed to run with the laying flock. Place an old cock bird with them and perfect order will prevail. Surplus cockerels should be sold or caponized before they become bothersome.

The poultry house should be littered at all times with straw eight to twelve inches deep. This should be renewed whenever it becomes damp, badly broken up or so full of droppings that grain thrown down is not quickly lost from sight.

A kerosene barrel with both ends removed, an automobile demountable rim, six small blocks, and a platform are the essential parts of a feed hopper made and used on a Kansas poultry farm. The rim is laid flat on the platform. Inside the rim, placed so as to fit the barrel, are the blocks. The barrel is then set on these blocks within the rim and the hopper is ready to receive the dry mash. Fill the hopper and put on the lid. It will hold enough to last 100 hens about two weeks. It is inexpensive and easily made.

Poultry School Farmers' Week.

An excellent program is being planned for the poultrymen of Colorado during Farmers' Week at the Colorado Agricultural College, Fort Collins, December 11 to 14.

Everyone interested in poultry is invited to attend the meetings and to take part in the discussions. Every poultry organization in Colorado is requested to send delegates to the Farmers' Congress which will be conducted at the same time.

One of the days of the poultry program will be devoted to furthering plans for the State Poultry Association.

Feeding Capons for Market.

Is it a good plan to let capons run with the laying hens and fatten on the egg producing ration? What is the best method of feeding capons for market? I have fifty March and April hatch Buff Orpington and Barred Rock capons which I expect to sell on the Denver market before Christmas. Will they have their full growth that early?—C. P., Weld county, Colo.

It would harldy be practical to make a separate pen for these capons at the present time. It will probably be best to feed them the same ration that the laying hens are getting and about three weeks before marketing time finish them with a ration largely composed of buttermilk or sour milk and corn meal. It is not usually recommended that capons be crate-fattened, but if confined to a small pen they can be fattened quickly. These capons should be ready for market by Christmas time. It would be a good plan, however, to keep a few of them that have done extra well for January and February markets. Capons usually bring good prices from Thanksgiving time until the last of Febrauary. —P. C. J.

Potatoes as Poultry Feed.

Potatoes can be fed to poultry if boiled or steamed and mixed with ground feed as a mash. Potatoes are quite fattening and should be fed in limited quantities to laying hens or growing chickens, and always in connection with other feed. A hundred hens can be fed about ten pounds of cooked potatoes daily, the potatoes replacing the corn meal in the mash portion of their ration. The following is suggested as a good combination for the mash including potatoes: One part meat scrap, one part middlings, two parts bran and four parts cooked potatoes by weight.

Gas Light for Poultry House.

We expect to start a poultry ranch in Idaho. Our land is nine miles from electric lights. Is there some kind of lantern we could use to prolong the hens' day as we will not be able to get an electric light plant at first. Do you know how to keep water from freezing? I think I read in Western Farm Life there is a way somewhat on the order of a fireless cooker.—Mrs. H. R. F., Ohio.

In my travels about Colorado I have found many successful poultrymen using acetylene lights and a few using other types of gas lights in their poultry houses. They have proved satisfactory. We cannot recommend any way of keeping the drinking water from freezing except to use some kind of oil lamp or oil stove. There are several makes on the market. You will find them advertised in the farm and poultry journals.—P. C. J.

Curing Egg-Eating Hens.

One or two hens in my flock have acquired the habit of eating eggs, and as yet I have not located the ones that are doing it. Is there any way to break them of this habit?—Mrs. D. M. B., Utah.

First be sure that there are plenty of nests and have them so arranged as to be dark. Hens as a rule will not learn to break eggs in dark nests. Most of the egg-eating starts from eggs being dropped about the floor of the house and perhaps accidentally broken. If you can locate the hens that are breaking the eggs you might try cutting the tip of the upper mandible of the bill back far enough to make it bleed just a trifle. This makes the bill blunt and sore and the hens will find difficulty in breaking the eggs. Of course, as a last resort it might pay to kill the one or two hens doing the mischief if you can locate them. If allowed to continue in the habit others of the flock may get started.—G. C. W.

Hens May Be Poisoned.

A serious epidemic has swept this part of the country in southeastern Bent county. The young and old chickens are affected alike. Post-mortem examinations show that the livers are three times as large as normal. They first act droopy and fail to eat, although some will eat to the last. They look yellow in the face and the droppings are a greenish color. They seem to die of strangulation, some within twelve hours and others twenty-four. Some of my neighbors have been losing chickens with this trouble since February. Mine began to die two weeks ago and from seventy-five old hens and young pullets only thirty-two are left. The pullets are in an open house separate from the old hens. We have been feeding all kinds of grain, red and white milo, wheat, corn chop, and plenty of sour milk all the time. They all have free range. We have tried putting one-half teaspoon of copperas in a gallon of water and have been cleaning the houses thoroughly every morning, going over the roosts with hot lime water. Is this trouble cholera?—Mrs. W. C. N., Bent county, Colo.

Your description is quite complete, but we are unable to make a definite diagnosis without having some of the birds to work on. If you will send one or two of the sick ones to the Veterinary Department of the Colorado Agricultural College at Fort Collins, a complete diagnosis can be made and a treatment recommended.

It is quite possible that there is some weed or food which is poisoning the fowls. Strangling is one of the symptomsof poisoning. The enlarged livers and the droppings being greenish also indicate poisoning.

Under separate cover we are sending you a bulletin, entitled "Important Poultry Diseases," which may help. On the last page you will find recommendations for treating poisoned birds.—P. C. J.

Control of Contagious Roup.

Contagious roup is sometimes a serious trouble in the farm flock. It occurs often as a result of poorly ventilated or droughty coops. The exact cause of roup, however, is unknown. It usually starts with a thin watery discharge from the nose and eyes. This secretion has a peculiar, offensive odor. The birds often cough and sneeze. The secretions from the nose and eyes change from fluid to a yellowish, cheese-like mass. The eyes may become enlarged and swellings may appear on the head. Infected birds carry the disease from place to place. Food and water often becomes contaminated.

Roup is easily controlled by proper management and housing. Unsanitary, poorly ventilated, crowded, draughty quarters are conducive to its spread. Remove the cause at once. Valuable birds may be treated individually. Place them in dry, well ventilated houses away from other birds and give them plenty of food and water. Every morning and evening remove all cheesy matter from the eyes and nostrils of the birds and dip their heads into a solution of bichloride of mercury in the proportion

Good News When the representative of the State Poultry Association calls on you with his letter of introduction, get all the information you can from him regarding the Raising, Care and Feeding of your Poultry as the service is Free of Charge. State Poultry Association, P. O. Box 1704, Denver, Colo.

of one part of the bi-chloride to 1,000 of water. Purchase this in tablet form and dissolve it in water, following the directions on the bottle. It is a deadly poison. Place the bottle where children cannot get it.

The following flock treatment is recommended:

1. Kill and burn all very sick birds.
2. Isolate birds having colds.
3. Use well ventilated houses.
4. Give the birds plenty of room.
5. Place a little kerosene on the top of the drinking water—do not use this more than ten days at a time.
6. Give Epsom salts in a wet mash at the rate of one pound to 100 birds.—P. C. J.

Egg Laying Contest Delayed.

The Colorado Agricultural College has experienced many delays in preparing for its egg laying contest to be conducted in co-operation with the people of Fremont county in Canon City. The site finally has been purchased and all plans have been made to open the contest on November 1, 1923. Entries will be accepted from anywhere in the United States.

Peculiar Results of Culling.

Fifteen cull hens were taken from the flocks of Frank Myers and sixty-three were culled from Mrs. Pearl R. Terry's flock at Two Buttes, Colo. Before culling, the egg records for ten days totalled 413 eggs from 201 hens. After culling, the good hens left produced 565 eggs in ten days, or 152 more than the whole flock had produced in the same length of time. The culls laid only four eggs in ten days.

The editor of the Two Buttes Sentinel, Ed Knowles, who published the results, wrote that he noticed a peculiar result of culling, which he would like to have explained. "After culling, the good hens left in both these cases produced more eggs than the whole flock did before culling," said Mr. Knowles. "In Mrs. Terry's case the increase was twenty-three eggs after the flock had been reduced more than 40 per cent. What is the reason? Do the non-layers have the effect of making the good hens lazy? It is a puzzle to me."

The good hens probably laid more eggs after the culls were gone because they had more feed and more room. It hardly seems that the culls could have had any influence in making the good hens lazy however, it may be possible that they did.—P. C. J.

Hens must be in good flesh if they are to become good winter layers. Feeding a good dry mash supplemented with a limited amount of fresh meat will give hens a reserve of fat.

Shorthorns at Royal.

A total of 334 Shorthorn cattle have been entered for showing at the American Royal Live Stock show at the Kansas City stock yards, November 18 to 25, according to W. A. Cochel, western field representative of the American Shorthorn Breeders' Association, and superintendent of the Shorthorn section of the 1922 American Royal.

The Shorthorn entries are made up of 286 head in the breeding classes and 48 in the steer sections.

Ten states and 42 exhibitors will make the 1922 Shorthorn show at the Royal, the largest number of Shorthorns ever shown at the Royal or in the central west, west or southwest at any time or place. W. H. Pew, Ravenna, Ohio, will judge the Shorthorns at the American Royal this year.

The Allen Cattle Company of Colorado Springs have eleven head entered, and the Maxwell-Miller Company of Littleton, eighteen head.

Colorado Herefords at Royal.

Eighty head of Herefords will be shown by five Colorado exhibitors at the American Royal Stock Show in Kansas City, November 18 to 25. George Baker of Littleton will show seventeen head. It is his first appearance here, but he is expected to make a strong showing in view of the splendid performance of his calves at the International and the National Western Stock Show last year.

W. N. W. Blayney of Denver will exhibit twenty head. The Blayney herd had entries in nine classes at the 1920 Royal and made a good showing. The herd is famous for producing the Denver grand champion bull, Blayney's Domino."

Eleven head will be shown by J. D. Canary, who operates a highly improved farm with a herd of 125 Herefords near Littleton. Mr. Canary has been a consistent showman at the Royal for several years. Last year his junior yearling bull, Repeater 66th, sired by his herd bull Repeater 63rd, was junior champion bull of the Royal. The same bull was junior champion at the last Denver show.

One of the oldest and best known Hereford breeders in Colorado is Dr. T. F. DeWitt, who will exhibit twelve head at the Royal. Dr. DeWitt has been a prominent exhibitor at the leading American shows for many years.

Twenty Herefords will be shown by the Ken Caryl Ranch Company at Littleton, owned John C. Shaffer, well-known newspaper publisher of Denver, Chicago and Indianapolis. This year marks his debut as an exhibitor at the big stock shows.

The eight Hereford entries from Colorado are part of the 660 head of Herefords which will make the 1922 Royal Hereford Show "the greatest exhibition of Herefords ever assembled in an American arena," according to an announcement made by the American Hereford Association after tabulation of the entries. Sixty breeders from fifteen state will participate. Hereford entries, competing for $11,255 in prize money, outnumber two to one all other breeds of cattle at the Royal.

LIVESTOCK NOTES.

(C. N. Henry, Fieldman.)

February 1 will be a busy day at A. D. McGillvray's, as that is the day he is claiming for his annual bred sow sale of Poland Chinas. Max Avalanche is coming fine and very proud of heading the prize list at the 1922 State Fair. Just mark this date on your calendar.

Seeley G. Rose, manager of the Pine Valley Dairy and Farms Co., Colorado Springs, will have his show herd of Milking Shorthorns at the International in Chicago next month.

Great Sale for Kalberer.

The sale for Jake Kalberer at Broomfield was a success in every way. A fine day, large crowd, and as fine a lot of Holstein-Friesian cattle as anyone would want to see. After a fine lunch at 12 o'clock the cattle were sold and interest never wavered in the sale.

They ran in price from $900 to $140 on the females, and bull calves sold up to $200. Chris Dowell of Longmont, E. Greenway of Arvada, J. A. Snyder of Boulder, N. N. Gehl of Denver, Charles Hake of Lafayette, Ray Horman of Lafayette, John Wick of Broomfield, Louis Eberharter of Louisville, Long Ranch of Broomfield; Mike Penrose, Sam Hansen, Ben Simpson of Denver, were among the buyers. Buchanan & Henry of Denver were the auctioneers.

Holstein Sales.

Just a last reminder of two very important days in Holstein history in Colorado—the Hall Brothers' sale on November 20. Five miles southwest of Denver. Sixty-five head of females of the very best breeding.

November 22, the sale of Whowell & Polly at Johnstown, when seventy-five head of some of the best Holsteins in the west will be sold. Just plan to attend these two sales—it will be time well spent.

Polled Hereford Sale.

Twenty-seven head of females, eight bulls and seven calves will be offered at public sale on November 21, at Lamar, Colo., by the Smith Livestock Company of Chivington, Colo. This is one of the best herds of registered Polled Herefords in the state of Colorado. It has been built up through careful selection and breeding and is the product of such herd sires as Polled Plato (884) 353393, Polled Dude 2nd (11187) 612340, and Polled Success A 3rd. Those in the market for Polled Herefords are quite sure to find what they want in this offering. One staunch supporter of the Polled Herefords says. "The Whitefaces have won unquestioned leadership among beef cattle on the western range for their great rustling ability as well as early maturity, feeding capacity and good beef conformation. The Polled Herefords have the added advantage of no horns to be removed with the loss, danger and pain at dehorning time."

Find Just What You Want.

Whenever you are in need of anything for your farm, ranch or household, and do not know where to buy it, look over the Farmers' and Stockmens' Ready Reference Directory in this issue. There you will find almost everything under the sun offered for sale by reliable firms that will treat you right in both price and service.

Shorthorns That Milk
ARE MONEY MAKERS.

A herd that will give you a good monthly cash income is what you will need in the future. One of our young bulls from a Record of Merit cow can develop your herd into a dual-purpose paying proposition.

We know the war is over and have bulls for sale at prices that you farmers and ranchmen can afford to buy. Write for our bargain list and easy payment plan.

We also have several young bulls for sale, priced to sell.

THE PINE VALLEY DAIRY & FARMS CO.
Seeley G. Rose, Mgr. Colorado Springs, Colo.

PUBLIC SALE
POLLED HEREFORDS
LAMAR, COLO.,
TUESDAY, NOV. 21, 1922
42 Head Registered Animals-42
Our Offering Consists of 8 Bulls, 27 Females and 7 Calves

Our herd was originally headed by Polled Plato (884)353,393, and was one of the most noted sires of this popular polled breed. Some of his good daughters formed the foundation dams of our herd, mated to Polled Dude 2nd (11187) 612340, also of Polled Plato breeding, have delivered calves showing strongly Plato's large size and prepotency. Our herd is now headed by Polled Success A 3rd, and was purchased by us to further improve the herd, and results received are more than gratifying.

Forty-two head from this remarkable herd will be sold at public auction. They are an offering of choice individuals of excellent quality and showing the best blood lines of the breed in their pedigrees.

Sale held at Lamar, Colo., which is situated on the main line of the Santa Fe R. R. easily accessible to all the West and Southwest.

The Smith Livestock Co., Chivington, Colo.

MR. C. McCALL WILL ALSO SELL AT THIS SALE A FEW GOOD HORNED AND POLLED HEREFORD BULLS.

BLUE RIBBON HERD
DUROCS

Buy them young and grow them yourself. Weaned pigs, regular price $25 to $50. Our specialty for short time on good farmers' boars, weaners, $15 and $20. Show prospects, weaners, $50. Are breeding now for fall farrow. Can sell you one or a carload. Our Blue Ribbon herd was the high winner at Denver. Write today.

The Blue Ribbon Live Stock Co.
C. F. Burke, Mgr. PUEBLO, COLO.

OUTSTANDING HOLSTEIN BULL

We have for sale a yearling son of a three-year-old heifer who made 1,035 lbs. butter last year and 21,428 lbs. milk, making her fifth in the world for butter production and ninth for milk for the year 1921-1922. The bull calf is sired by a 30-lb. son of Johan Duchess De Kol Lad, a bull who has two world record sisters, and two world record daughters. Calf is mostly white and a beautiful individual.

WRITE FOR PRICE.
WHICH IS REASONABLE.

Mrs. R. G. Douglas, Rush, Colo.

Milking Shorthorns
All Cows In Milk Officially Tested.
Service bulls of World's Record breeding. Both males and females for sale. Personal inspection invited. Send for Illustrated Booklet.
THE BONVUE FARMS CO.,
Stockyards, Denver, Colo.

We have bred hundreds of prize-winning and high-producing Holstein cows, including
Tilly Alcartra
We can supply you with that same line of breeding. Write
McKAY BROS., Caddoa, Colo.

PRODUCTION — TYPE — SIZE — BREEDING
We offer you a wonderful amount of these Holstein qualities—and from a clean herd. Bull calves from fine record dams. Pahgre Valley Ranch, Loesch Bros., Montrose, Colo.

Buy a Calf Out of This Herd
Twenty cows in this herd on an official seven-day test averaged 446.13 lbs. of milk and 20.19 lbs. of butter.
COLORADO STATE HOME,
2305 S. Wash. St. Denver, Colo.

GREAT BARGAINS, 960 HEAD HEREFORDS, SHORTHORNS, ABERDEEN ANGUS
1, 2, 3, 4 and 5 years old. Cows, heifers and bulls. Prices $75 to $120 and up. 360 Percheron and Belgian horses, stallions, mares and colts, 1 to 6 years old. Prices $125 and up per head. One head or a carlot. Breeding guarantees with each. Registered pedigrees by mail. Stock on twenty farms in Iowa and Illinois. Write for circular and particulars. Address ILLINOIS HORSE & CATTLE CO., Good Block, Des Moines, Iowa.

Brauer Purebred Duroc Co.
Colorado Springs, Colo.
The greatest individual lot of spring boars at moderate prices, to close out early. Now is your time to buy.
Write for full particulars, etc.
J. W. BRAUER, Gen. Mgr.
22 Lorraine St. Colorado Springs, Colo.

Milking Shorthorn Grades Heifers and Young Cows
Reds and roans. Heavy in calf, and Springers. Especially selected from good herds. One or a carload, priced reasonably, quality considered.
C. H. HINMAN,
STOCKYARDS, DENVER, COLO.

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We make a specialty of furnishing foundation herds. Show and Herd Boar prospects that combine the blood of the greatest show hogs ever produced. Lookouts, Wickwares and Tiptons. For free booklet etc., write N. E. MOSHER & SON, Hugo, Colo.

Bates Shorthorns
are the foundation blood of true Milking Shorthorns. We have them. A few bulls for sale.
THE CARPENTER CATTLE CO.
GREELEY, COLORADO

SPRING BOARS
Just a few real herd headers left ready to go at pre-war prices. Used with grade sows even, they will more than pay for themselves on the first crop of pigs. Write today.
C. C. Boyd, Yuma, Colo.
Livestock Auctioneer and Duroc Breeder.

Buy MILKING SHORTHORNS
from the oldest established herd in the state.
We can supply your needs in bulls of beef type either horned or polled Shorthorns.
Write Superintendent for folder on breeding and prices.
State Industrial School,
Golden, Colo.

BUCHANAN & HENRY,
LIVESTOCK
AUCTIONEERS
1927 Broadway Denver, Colo.
Write us, or Phone Champa 4655.

Home foods and school marks!

Why healthy bodies usually harbor bright minds.

For years teachers have puzzled over this problem:

Of two children with perhaps the same *native* intelligence the one, with little apparent effort, leads his class. The other struggles, yet barely "keeps up."

Lately, however, we have learned that careful home cooking has a surprising bearing on good school marks; that healthy sparkling brains are nearly always found in healthy buoyant bodies.

One striking illustration comes from New York City where the Bureau of Child Hygiene estimated that 216,000 school children, prosperous and poor alike, were seriously under-nourished.

As doctors, nurses, newspapers and magazines broadcast this newly discovered condition, children will gain the benefit in *more digestible* home foods.

Fats, for example, are necessary to health because they supply one-third of our energy. And a mother may end her search for a digestible fat when she finds Crisco. For in Crisco she has a truly digestible shortening—a *vegetable* shortening.

And what fine satisfaction thoughtful mothers find in cooking with Crisco! In most homes the mere assurance of healthfulness in fried foods is enough to make Crisco a prized kitchen companion. But Crisco is a versatile shortening—it gives wholesomeness to foods but it assures, also, as delicious cakes, pies and cookies as you ever tasted.

Two things, then, to remember: Crisco is a *vegetable* shortening. Crisco imparts healthfulness and easy *digestibility* to family foods.

You will appreciate, now, why Crisco must cost, during a week's cooking, a little more than do shortenings which can have no pride in their origin. These extra pennies are gladly spent by informed mothers as insurance against risk to young digestions.

Grocers may well take satisfaction in selling a food ingredient like Crisco whose healthfulness is so certain.

Two Simple Home Tests!

Low Melting Point. Easy Digestibility.

Into half a glass of lukewarm water drop a small lump each of Crisco and any other shortening. With a teaspoon gradually add hot water until Crisco melts. You will find that few other fats melt at this point. Food authorities say that an easily digested fat should melt near body heat—98⅖ degrees. Crisco, you will find, melts even below this temperature. It melts at 97 degrees. (This test does not necessarily condemn the digestibility of the other fat, but it will aid you to establish Crisco's fine digestibility.)

Avoid Smoke and Odor!

Put into separate pans equal amounts of Crisco and any other fat. Heat slowly for eight minutes, or until they reach a temperature where a bread crumb browns in 40 seconds.

Notice that the Crisco, unlike most cooking fats, does not smoke at this proper frying temperature.

You will find that frying with Crisco will be very helpful in keeping your whole house fresh and free from the odor of cooking fats.

Special Cook Book Offer!

This fine, helpful cook book entitled "A Calendar of Dinners" contains 615 recipes and 365 dinner menus. If you wish it mail 25c to The Procter & Gamble Co., Cincinnati, Ohio, Section U-11, Dept. of Home Economics.

Digestible Vegetable Shortening

For delicious digestible cakes
For flaky and digestible pastry
For wholesome, digestible fried foods

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Colorado County Plans to Enlarge Dairy Interests — Page 4

WESTERN Farm Life

Vol. XXIV. *Denver, Colo., December 1, 1922.* *Semi-Monthly*

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Grow Into the Dairy Business.

The Rural Household. Dairying and Hog Raising.

Pleasures and Profits of Trapping.

From the Nation's Capital.

Message of the Christmas Seal.

Colorado County Plans to Enlarge Dairy Interests.

Is Your Sheriff a Bootlegger?

OR IS he merely winking at the violations of the prohibition law? Investigation shows that 90 per cent of the farmers are "dry."

Liquor interferes with the successful operation of their farms.

What are you going to do about the open violation of this law you helped to pass? How are you going to fight the gang who are trying to repeal it?

The Country Gentleman is running a remarkable series of articles on prohibition, showing just how the slipshod handling of this rum question is affecting your pocketbook.

These include stirring articles by our well-known investigator, HARRY R. O'BRIEN, Is the Farmer Wet?—and the opinions of County Agents the country over, entitled Repeal? No! Enforce? Yes!

And other articles, including a thought-provoking one by JAMES R. HOWARD, President of the American Farm Bureau Federation, will follow.

These appear in the next thirteen issues. You can't afford to miss them.

What Makes You the Most Money?

What crop that you can raise will make the most money for you?

What enterprise? What management? What method? Concentration on one product or two or three?

The Country Gentleman sent an investigator 3,200 miles asking "dirt" farmers these questions.

The answers are published in a series of aticles continuing through the next thirteen issues.

Vital information here. Information that may mean the difference to you between profit and loss, or between ordinary profit and big profit.

Our investigators found farmers that were making extraordinary successes because they knew what to do.

Find out what they did—in the next 13 issues.

This is but one of the many phases of the farmers' business that will be covered in the next three months.

Strikes—

The Farmer *Always* Gets Stung

You bet the farmer always gets stung—no matter who wins.

But just **how?**

Have you figured out all the ways by which you get the short end of it? Have you counted the cost to you when the railroad men or the miners or anybody else goes on a "vacation"?

EDWARD HUNGERFORD has.

He tells in vigorous fashion just how, and suggests a remedy.

This also comes in the next thirteen issues.

13 Issues for Only 25 Cents

For only 25 cents, we will send you the next 13 issues of **The Country Gentleman**, containing these and many other important features.

The Country Gentleman is a practical "dirt" farmer's magazine.

It emphasizes the **business** end of farming. It shows you constantly in hundreds of different ways how you can make more money out of farming in your section of the country.

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Your first issue, mailed promptly, will be worth to you more than the whole amount.

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25¢

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Name

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The COUNTRY GENTLEMAN

3310 Independence Square, Philadelphia, Pennsylvania

Changes in Beef Production Since 1850.

Beef production in the United States has undergone marked changes since 1850, and chief among them is the difference in age to which animals destined for slaughter are kept on the farms. This is one of the many phases of the industry discussed in the 1921 Yearbook article, "Our Beef Supply," prepared by livestock specialists and economists in the Department of Agriculture. This change is discussed in connection with variations in the demands of consumers and the per capita consumption of beef.

With a larger proportion of beef cows kept, and with cattle slaughtered at an earlier age, it is now possible to raise more beef each year than when there were more cattle in the country than at present. However, the system of using younger cattle for beef involves the use of more harvested feed per 100 pounds of beef produced, since a larger proportion of the gains in weight are made in the feed lot than was formerly the case when steers were carried four or five seasons on grass.

We are eating less beef per capita than formerly, but the figures show that when demand and prices provide sufficient stimulus the supply can be increased at a surprisingly rapid rate. The consumption of beef and veal in the United States decreased from 87 pounds per person in 1907 to 60 pounds in 1915, a net variation of 27 pounds. Between the periods of 1907 to 1910 and 1911 to 1921 there has been a decrease in consumption amounting to approximately 20 per cent.

The article contains interesting information on the variations in demand for different kinds of beef in various cities and in the different sections of the country. High-class hotels in the large cities want prime, fat, and finished beef, while the average housewife wants beef involving less waste. In warm weather the principal demand is for steaks and chops, while the winter trade demands more roasts and boiling beef. The orthodox Jewish trade uses only the forequarters, while Gentiles, as a rule, prefer hindquarter beef.

This survey of the beef-cattle situation, which includes, in addition to the discussion of consumption and present trend, information on various factors of production and marketing, leads to the conclusion that the period of liquidation is over, and that when industrial conditions and retail prices permit a normal consumption of beef, cattle producers should be prosperous again.

The 1921 Year Book of the United States Department of Agriculture is radically different from previous Year Books. Instead of running a number of magazine articles covering a great variety of subjects, the space is given to studies of four of our principal crops. In addition to the article on our beef supply, the book contains articles on the "Corn Crop," "Wheat Production and Marketing," and "The Cotton Situation." There is the usual statistical material. No progressive farmer's library is complete without a copy of the Department of Agricnulture Year Book. Write to your member of Congress for one of these books.

Letting Hogs Harvest the Crop.

There was a time when the hogging down of a crop was looked upon as a practice of the lazy makeshift farmer. It has been found, however, in recent years that making animals do the work of harvesting the crop is a profitable procedure. Investigations at the Missouri experiment station, covering a period of three years, have developed four distinct feeding plans in which the hogs have harvested the crops themselves. While some of the crops are not adapted to Colorado or mountain conditions, the results in general will be of interest to hog farmers who may be contemplating the plan of making the hogs harvest the crop themselves.

In these Missouri tests one plan was to grow corn and soy beans together and hog them down, supplying tankage as a supplement. The second method was to hog down corn alone, with tankage as a supplement. The third was hogging down corn and soy beans without the supplement, and the fourth hogging down corn without a supplement. Fifteen 110-pound hogs were fed according to each of these plans for periods of about twenty-three days.

Plan No. 1 resulted in a total gain of 541 pounds of pork per acre, with a total of 207 pounds of tankage. The hogs made a daily gain of 1.75 pounds per head. The amount of tankage consumed daily per head was 0.64 pound, and the tankage consumed per pound of gain was 0.39 pound. The yields of grain on this field were 36 bushels of corn and 4.46 bushels of soy beans per acre.

Plan No. 2 resulted in a total gain of 623 pounds of pork per acre, with a total consumption of 280 pounds of tankage. These hogs made a daily gain of 1.87 pounds per head. The amount of tankage consumed daily per head was 0.76 pound, and the tankage consumed per pound gain was 0.41 pound. The yield of corn in this field was 44 bushels.

Plan No. 3 (corn and soy beans without supplement) gave a total gain of 319 pounds of pork, with a daily gain of 1.28 pounds per head. The yields of grain in this field were 34 bushels of corn and 3.93 bushels of soy beans per acre.

Plan No. 4 (corn alone) gave a gain of 318 pounds of pork per acre. This field made 43 bushels of corn per acre and it required 26 instead of 23 days to clean it up by this plan. The hogs here gained only 0.97 pound per head daily.

Besides throwing some light on the relative production of corn and soy beans compared with straight corn, this experiment proves conclusively that gains of pork from either field will be greatly accelerated and considerably cheapened by feeding tankage as a supplement.

"A large amount of water is required by hogs on full feed," adds L. A. Weaver, who had charge of the tests. "Hence it is particularly essential that an abundance of pure drinking water be available.

"Care should be taken to see that hogs continue on full feed after they have started. If the supply of corn runs low they should be immediately moved to a new area, or additional feed should be given.

"It is also good practice to supply the hogs with a mineral mixture of some kind. Glauber salts, 3 parts, copperas, 3 parts; sal soda, 3 parts; common salt, 3 parts; charcoal, 4 parts, and sulphur, 1 part, in boxes within reach of the hog will help prevent worms."

Shoats averaging from 75 to 125 pounds are the most desirable for turning in on corn. It is not well to turn the hogs into a larger field than they can clean up in three weeks. A good plan is to fence off the field in strips which will be cleaned up in about this time. This can be done by running a temporary woven-wire fence through the field and moving it as required. It has been found that it will require about three weeks for ten hogs to clean up an acre of thirty-bushel corn.

Size of Colorado Farms.

The average size of farms operated in Colorado the past year according to the reports of county assessors is 205.09 acres. This is a slight increase over last year. The figures show the number of farms in the state to be 54,664, compared with 52,245 reported last year. The total farm acreage reported this year is 16,131,233, compared with 15,392,391 the preceding year. There has been a slight increase in the farms operated by tenants, the assessors reporting 14,114 tenant farmers this season, as compared with 12,698 the preceding year. The reports show that Phillips county has the largest percentage of its area in cultivation. The average size of farms in this county is 439.5 acres. Las Animas county, the largest in the state, reports but slightly more than 20 per cent of its total area in farms. This county still has large areas capable of being brought under cultivation. Nearly a million acres has been homesteaded in the county during the past six years.

Government Bulletins of Interest.

The list of Farmers' Bulletins to be issued during December will be of value to many of our readers. Copies may be obtained free by addressing the Division of Publications, United States Department of Agriculture, Washington, D. C.

Farmers' Bulletin 682, "Sample Trap-Nest for Poultry"; 702, "Rabbits in Relation to Trees and Crops"; 828, "Farm Reservoirs"; 1114, "Common Poultry Diseases"; 1116, 'The Selection and Care of Poultry Breeding Stock."

Obtaining Educational Films.

Motion picture films covering a wide range of subjects may be obtained free from the United States Department of Agriculture, Washington, D. C. Department Circular No. 223, "Motion Pictures of the United States Department of Agriculture," has just been issued and will be mailed free on application. It tells how these films may be obtained for community meetings and gives a list of subjects.

Western Farm Life

A Western Magazine for Western Farmers and Stockmen

VOL. XXIV. DENVER, COLORADO, DECEMBER 1, 1922. No. 23.

High School Boys Become Practical Farmers

FARM USED AS LABORATORY IN TEACHING VOCATIONAL AGRICULTURE

George Frederick Stratton.

AN enthusiastic woman at a great convention of educators in Salt Lake City struck the keynote of the deliberations in the terse epigram, "We have always forced the child to fit the school when we should have forced the school to fit the child." A demonstration of that principle was begun a dozen years ago in the high school of the city of Boise, capital of Idaho, and it has developed until it has placed that far-western metropolis in the van of practical vocational education. And it was not originated by the teachers or professors, but by the pupils themselves.

In an interview O. O. Haga, president of the board of education and a prominent Boise lawyer with stock-farming as a side line, gave some very interesting information as to the different steps which led up to this excellent example of vocational education. He said:

"The origin and success of our high school farm, of which we are all justly proud, is due to the initiation and insistence of the students themselves. A dozen years ago our high school had an agricultural course as many others had—just a school room course with charts and books and pictures. During the farm season whenever transportation could be secured, the boys were taken out on field trips, but that was the extent of any attempt at practicability.

Boys Build Poultry House.

"The farm itself was begun by the boys urging us to let them have a chicken yard in the rear of the high school grounds. The board was astounded and utterly adverse to that, but it was still urged and finally, as no expense would be entailed, for the manual-training boys would do the work, consent was given. The house was built and twenty-five good hens secured."

I have a shrewd idea that Mr. Haga himself furnished those hens. He continued: "The next year some of the boys told us that they were sure they could get the use of the big oval inside race-track at the fair grounds to use for crops, and again we had a struggle in the board—pretty well prolonged—and again the boys won. A small appropriation was granted for plowing and for seeds and for two years the boys worked that place.

"But they had no horses or cattle and no buildings; nothing but the patch of fenced land and everything had to be cleaned off that before early September, when the fair was held. So the boys got eager for a larger place—a real farm. Interest began to be aroused in the board by the hearty work of the boys and we rented a small farm, close by, with some old buildings on it and we put on a team and a few head of cows and some equipment.

"Another three or four years passed and even the men who had at first bitterly opposed anything of the kind, became enthusiastic. In visiting that farm we saw that the boys had done fine work in improving the buildings and fences and decidedly improving the land, and we saw that all that was being done for the owner who might very soon decide to take it over himself.

School Farm Pays Expenses.

"So we went right at it. We bought forty acres four miles out for $12,000. There were no improvements and we have spent $18,000 more on new buildings, equipment and stock, although most of that sum was spent for material only, as our manual-training class boys did most of the work.

"And last year the returns from that farm paid all expenses. The boys know that—just how every cent was earned and spent—and they're fully as proud of it all as we are. The value of it as a true practical education can only be estimated by real farmers. We know that we are turning out the material for fine business men—not mere sheepherders and wheat growers."

Then he introduced me to Mr. Zimmers and in fifteen minutes we were in his auto riding over the four miles of excellent road to the farm. On the way his conversation revealed, I think, greater interest in the farm than in any other branch of his city schools. He said: "You know the agitation and discussion that has sprung up since the war on more practical education—vocational education. Well, the State Commissioners got started on that before Kaiser Bill started on his little jaunt to Paris, via Belgium. They put the boys of the agricultural course out onto a rented farm in 1912, and they've kept at it until now they have this farm—forty acres of the best land in the valley; new buildings and a score of fine cattle and horses, besides hogs and poultry. It's a farm run by boys and practically managed by them. It's practical education; really more practical than the agricultural college, because the work there is largely experimental. This is every-day, every-year work of any good farmer and the returns from that farm are paying the expense.

"The agricultural course of four years is optional, of course, and the enrollment last year was sixty-seven. The first year is on field crops; the second and third years on animal husbandry, and the fourth year on farm management.

Students Do Farm Work.

"All boys report at the high school every morning. Then the particular class which is to go out on the farm that morning climb into the four-ton truck we use, and go out with their directors. The next day another class goes out."

When we reached the farm I was introduced to C. C. McCormick, who is the crop director, and C. S. Murray, the director of animal husbandry. Dotted about the picturesque group of buildings and fields were groups of boys, so engrossed in their work that they gave only casual glances at the superintendent and myself. Mr. McCormick took me in charge for a trip around the buildings.

One is a large hall, 60 by 110 feet, which they call the pavilion. At one end are raised seats of plain wood for the students. Before them is a large open space with concrete floor, onto which cattle or horses, hogs or sheep, or farm equipment, may be brought and the students instructed in judging the good and poor points. The director listens with earnest attention to the criticisms and opinion of each student and the stock, or equipment—if new—is subjected to praise or scorn of those enthusiastic young men.

Adjoining the hall and opening from it is the grain room for the study and testing of seeds. The equipment is excellent and includes field instruments and simple levels for determining slopes, running fences and irrigation ditches. The boys have very thorough practice with all these in the fields.

Manual Training Classes Erect Buildings.

The barn is especially designed to show the proper arrangement and equipment for a farm of moderate size and moderate means. There are stanchions for sixteen cows; calf pens with outside runs, and a bull pen. Outside there is a milk room with cooler, Babcock tester and cream scales.

Close by is the hundred-ton silo and across a driveway is the horse born with sensible sheds for wagons and machines. An adjoining building is the workshop with garage. Here there is a forge, lathe and hand tools. The hog house, built on most approved lines, holds twelve sows and has ample pig runs. Standing out in front of all is the directors' or farm house, a plain but very hospitable looking building with a glorious kitchen and dining room in which co-eds of the domestic arts department of the high school can, on their visits, show the latest effects in chicken croquettes and Mexican goulash.

Interesting as all these are, the most interesting is the fact that all these well-designed and well-built structures were built by the boys of the manual training course. "Their instructors," said Mr. McCormick, "came out and bossed them, but they did the work—all of it. We've got the practical education bug, all right, and if you had seen the eagerness—the struggle among those manual training boys to get out here and do real work, you'd be impressed by the spirit they showed. We've got a good carpenter shop at the city school, but the boys get fed up on making chairs and desks. I think many of them are looking ahead to the time when they'll be out on sage-brush homesteads, building their own homes and barns."

Later in the day I looked over the buildings again, examining the joints, fittings and other details. It was the most impressive exhibition of manual training that I had ever seen.

The stock is chosen for demonstrating to the classes the type of horses best suited to the class of land they have to work, the type of dairy cows for an ordinary farmer, and so on. There are ten pure-bred Jerseys and Holsteins, one registered Jersey bull—La Creole's Dolly Boy, a prize winner with a reputation; three purebred Percheron mares; four registered Duroc Jersey sows, and 100 purebred White Leghorn hens. A farm foreman, (Turn to Page 14)

A class at work judging Duroc Jersey hogs.

Boys of agricultural class ready for field trip.

Colorado County Plans to Enlarge Dairy Interests

COMMITTEE STUDIES METHOD SUCCESSFULLY USED IN MISSOURI

PROWERS County, Colorado, is considering a dairy development program similar to a plan originated five years ago in Pettis County, Missouri. This plan has been copied by a number of communities all over the country and it has been successful in promoting the dairy industry and creating interest wherever it has been tried.

The Pettis county project was closed with a sale of the cattle early in November. A committee from Prowers county, consisting of C. A. Pedersen, agricultural extension agent; R. M. Reed, fieldman of the Helvetia Condensery, and Harry Heath, one of the leading dairymen of the community, went to Sedalia, Mo., to attend the sale and to learn what the men who have tried the experiment think of the plan as a means of introducing dairy cattle.

Organize Stock Company to Buy Cows.

In the spring of 1917, C. M. Long, who was then Pettis county agent, proposed to business men and farmers of that community that they organize a stock company, buy Holstein cattle in Wisconsin, place the cows in the hands of farmers who should feed and care for them for their milk production. The cows were to remain the property of the company, but the increase were to be owned jointly by both parties to the contract. Bull calves were to be sold before they were a year old, but females were to be retained in the herd, if they proved to be profitable, until the end of five years, when all cattle on hand were to be sold at auction in Sedalia and the net proceeds were to be divided equally between the farmers and the company.

Products Go to Care-taker Farmers.

The farmers were to have all the milk produced and were to pay a half of veterinary and breeding fees. The company was to pay all advanced registry fees, half the veterinary fees, provide good bulls for service on the foundation cows and their increase. The contract provided also for tuberculosis testing, advanced registry testing and for a cow-testing association. The company was given the right to take the cows from any farmer who did not care for them properly or who did not live up to the contract in any other way.

One Hundred Cows Purchased.

When Mr. Long took this plan to the farmers and business men he met a ready response. A company with $30,000 capital stock was soon organized. Approximately 100 cows were bought and placed in the hands of farmers who also were required to take a minimum amount of stock, ten shares at $10 for each cow they received. The cows were carefully selected. Most of them were with calf or had young calves at side, so that they were ready to begin paying returns soon after they were placed on the farms.

Three good bulls were provided, Brooking's Cornucopia, King Pontiac Bettina, and Admiral Walker Prilly. These were of excellent breeding and the first and last were tried sires and had several A. R. O. daughters each before they were purchased. They proved to be good breeders and their influence will be felt for many generations in Pettis county. Not a farmer who took the cows could have provided the services of such bulls. With the small number of cows each had, none could have afforded to buy a sire of their breeding and records, and there were none in the county. It is unlikely that they could have bought service even though someone had had a good bull in the community, because the owner would not have cared to take the risk of breeding outside his herd.

From Grain Farming to Dairying.

This project has almost transformed a general grain farming community into a dairy center. There are not so many cows there now as there will be in five more years. The dairy business is not so extensive that it can be called the chief farming interest, but it is large enough to make its influence felt. Bankers are already making comparisons of the relative promptness with which general farmers and dairy farmers meet their obligations. They believe that milking cows gives better returns than feeding steers and raising corn and wheat.

A wonderful dairy sentiment has been created by actual demonstration. Those farmers who were keeping cows have, by means of the cow testing association, had the advantage of better breeding brought forcibly to their attention through a comparison of production records. Many men have been induced to take up dairying permanently. A score or more have been given a start with purebreds. The movement has been responsible for an increase of 800 per cent in the number of purebred dairy cows in the county. Where there were but seventy-five five years ago, there are now 600. There has been a corresponding increase of high-grade cows. A calf club, made possible as a result of the plan, has distributed 400 high-grade Holsteins in the county.

Purpose of Company Realized.

Although the Pettis county plan has been successful in bringing a permanent business to the community, it was not a financial success. This was due largely to purebred conditions. Total expenses of the project, including cost of the sale, ital stock amounted to approximately bulls, incidental expenditures and cap- $50,000. Receipts before the sale brought this down to approximately $43,000, as estimated by C. E. Messerly, president of the company. The sale totaled approximately $27,700, with a sale expense of $3,000 for the 272 animals. The stock was estimated to pay about 50 cents on the dollar. Had prices been better the company would have broken even and might have made some money.

The stockholders, however, did not go into this project with the intention of making money. They wanted to bring good cows to the county and to build a dairy community in as short a time as possible. If they made money, well and good, but they were willing to put whatever it cost to finance the project into a community development scheme. Conditions were against them, and they lost money on the stock, but they have a business established which will tide them over all future periods of depression to come.

It will be interesting to those communities in other parts of the Middle West which have undertaken this plan or who are considering it to know how the increased panned out. The company had figured on nearly 900 animals from the 100 cows. They actually got about half that number. The reason can be attributed largely to failure for some reason to get the cows with calf. Losses of foundation stock were a little heavier than expected. They counted on a loss of 20 per hundred and there were 25. Losses of increase, however, were not excessive, since there were only 54 per hundred original cows.

Colorado Dairymen Impressed With Plan.

The Prowers county delegation were quite impressed with the suggestion that a revolving loan fund be established so that each man could buy the breed and quality of cattle he desired. That would make him owner of the cattle and he would feel greater responsibility. This idea has some advantages, but according to nearly all of the stockholders and farmers in the Pettis county company, the farmers in a non-dairy section cannot be induced to assume such responsibility. There is a further disadvantage unless good bull service be provided.

Another advantage to the plan as it was worked out in Pettis county is that a breed center is possible where the stock company is formed. If each farmer were permitted to make his choice, two or three breeds, and possibly more, might be introduced. Where one breed is decided upon in advance, all interests are centered upon it. Pettis county is now considered one of the largest Holstein centers of the Southwest and it is in position to do community breeding. In fact, a breed association is now under way and the foundation is already laid.

One of the important features of the sale was that nearly all of the good cattle were retained in the county. Not more than seventy-five went outside and about forty of these remained in the state. Had the demonstration not been successful in creating a demand for dairy cattle, farmers would not have bought them to be returned to the farms where they had been kept.

This cow, Kolrain Marion Finderne, owned by Loeb Farms, Charlevoix, Mich., produced 35,339.5 pounds of milk in one year, containing 1,278.56 pounds of butter. This cow with her daughter hold the world record for combined year's production of dam and daughter.

More than 500 scrub bulls have been replaced with purebreds since March 15 in the state-wide "Better Bull Contest" being conducted in Kansas. Cash prizes to the amount of $2,000 have been offered by the Kansas City Chamber of Commerce to the counties making the best records. Forty counties in the state are active in this contest, which closes January 15, 1923. In one county breeders made a bargain sale of purebred bulls. The animals were appraised by a committee and then marked down 25 per cent and a large ticket placed on each bull just as a merchant marks down his goods on a special sale day. Scrub bulls were taken as part payment at their value on the local market. Every one of the twelve bulls so listed were sold, the highest priced bull bringing $125.

Why not plan to give the boy or girl a real live Christmas present this year in the form of a purebred calf or pig or a trio of chickens?

Boulder County Wins at Seed Show

SUCCESS OF FIRST ATTEMPT AT STATE EXHIBITION INSURES PERMANENCY OF EVENT.

Waldo Kidder.

FIRST prize for county display at the State Seed Show, held in Colorado Springs, November 15 to 17, was won by Boulder county on an exhibit in charge of William Sauer. Logan county was a close second, with an exhibit staged by George Huffman. Rio Grande county was third, with O. F. Diller in charge; El Paso county, fourth, and Otero county, fifth.

The first Colorado State Seed Show was a decided success. The purpose of the show was to demonstrate what registered and other pure seeds were, what they were doing under various conditions, and to stimulate more farmers to used good seed. It was promoted by the State Farm Bureau, the Chamber of Commerce of Colorado Springs, and the Extension Service of Colorado Agricultural College. The Chamber of Commerce of Colorado Springs, where the show was held, financed it. Prizes were offered for the best county displays showing seed stock for sale in the respective counties and the results being obtained. These county exhibits were in charge of county seed growers. The seed samples in these county displays were not to be hand-picked or above the average quality.

There were classes for individual entries on the small grains, corn, potatoes and alfalfa seed. The final boys' and girls' corn club show also was held in connection with the seed show.

In every class, competition was strong. There was a very good number of exhibits and the quality was such that the show can well be said to be the quality show of the state.

In the grain exhibits, John Howell of Montrose won sweepstakes and the John K. Mullen trophy on a peck of hard red winter wheat. A Boulder county entry of Marquis spring wheat was runner-up in this class. In the oats, R. A. Chisholm of Del Note carried away the honors. In corn, Blakeland Farms at Littleton was awarded sweepstakes on a sample of Minnesota 13.

In the corn club classes, Bernard Buster of Lyons won first on his half-bushel crate and ten-ear sample of Minnesota 13, with Arthur Rossiter, Broomfield, second, and Paul Hoffman, Iliff, third.

In potato classes, Dr. E. P. Sandsten, who judged the exhibits, was delighted with the high quality of the samples brought to him for placing. He remarked repeatedly that the seed stocks were of remarkable trueness to type and free from disease. Sweepstakes award went to Fred Diller of Monte Vista, on a sample of Brown Beauty seed. Runner-up in this was his father, O. F. Diller, with a sample of Peach Blows.

A number of farmers from various parts of the state were in attendance, making arrangements for pure registered seed. Among seed companies represented were: Barteldes, Colorado, Western, and Rocky Mountain of Denver; Seldomridge and Robinson, of Colorado Springs; Pierce of Pueblo; Fort Collins Seed Company of Fort Collins, and H. Van Buskirk and James of Rocky Ford. These men were very much pleased with the show and hope that it will develop into a better and bigger one.

The show was intended for a place of exchange between grower and buyer, and this it proved to be. On account of the quality of seed samples shown and the interest of seed buyers at the show, its success for next year and the years to come is assured.

One of the important developments of the show was worked out at a seed growers' meeting Thursday, November 16. This was temporary plans for a state seed growers' association. On the organization committee, George Hoffman of Iliff and Fred Flook of Colorado Springs were elected, and a third member is to be appointed by the Colorado Agricultural College. This committee will have as its object the making of plans for the 1923 show and will be in charge of the State Seed Growers' Association, and will also act as an advisory board in regard to registration of grains.

Of special interest was the John K. Mullen wheat trophy, awarded this year to John Howell of Montrose. The trophy is given by Mr. Mullen for the sweepstakes hard red wheat and must be won three years out of five to become the property of the grower. A provision in the rules provides that the sample winning the trophy will become the property of the association.

Poultry-House Plan for Colorado Conditions

OPEN-FRONT TYPE PROVIDES LIGHT, GOOD VENTILATION, AND WARMTH

A PROPERLY planned and constructed poultry house is a most important factor in getting maximum egg production from a flock of hens or pullets. This particularly is true during the winter season, when it is highly desirable to have as many eggs produced as possible.

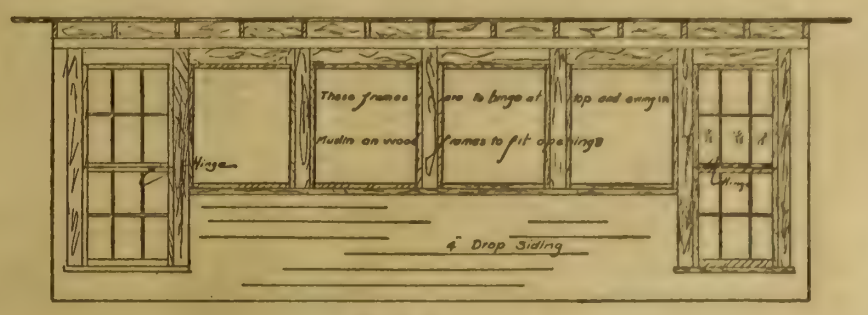
The open-front shed-roof type of house facing the south has been found most satisfactory by experienced poultrymen. It provides plenty of light, good ventilation and sufficient warmth and is not expensive to build. A house of this type is recommended by Paul C. Jamieson, extension service specialist in poultry, and O. C. Ufford, instructor in poultry culture at the Colorado Agricultural College. After careful consideration of all the essentials of practical poultry house construction, Mr. Jamieson and Mr. Ufford present a type plan to poultry producers of the state.

In dimensions this house is twenty-four feet long by eighteen feet in depth. Some poultrymen like to build their houses twenty feet in depth. The deep house has many points in its favor. It provides more room for scratching space. The roosting place is farther away from the open front and the fowls are not so liable to catch cold. The house is warmer than one narrow from front to rear. A house of this type may be built any length desired. The one illustrated, twenty-four feet in length, will comfortably house from 100 to 125 hens, providing both roosting place and scratching room.

Good Ventilation and Light.

The large windows on each side of the open front let in plenty of light even when the curtains are down. The top sash may be hinged to the bottom, so it will open in. These windows may be covered with wire mesh of some kind to protect the glass. The ventilation of the house is largely through the open front and is a most satisfactory type of ventilation, providing an abundance of fresh air without draft.

A ventilator for letting fresh air in from the back side has proved desirable and can be added. It is very essential, however, that any openings on the north or back side be so planned as to prevent any direct air currents from striking the hens. To accomplish this purpose a ceiling is placed on the lower side of the rafters above the roosting space, extending to the back of the house. The fresh air is admitted through a six-inch trap door just beneath the roof at the rear. The cross-section drawing will show the method of getting the fresh air in without creating a draft directly on the fowls. This small door in the rear is hinged at the top and may be closed during exceptionally cold or stormy weather. When it is open it will be noted by referring to the drawing that the fresh air passes between the ceiling and the roof and comes into the house just in front of the roosting space.



SOUTH ELEVATION

Muslin to Cover Open Front.

The open front is closed by means of four frames covered with unbleached muslin. These frames should fit tightly into the openings. They are hinged at the top to swing in and are fastened to the rafters by means of hooks when open. As a rule it is only during storms and on cold nights that these muslin-covered frames will need to be in place in the openings. When they are closed the air will pass through the muslin slowly without creating any draft. This insures perfect ventilation.

Partitions Prevent Side Drafts.

Tight partitions extending from the back of the house to three feet in front of the dropping platform will prevent side drafts in the roosting places. Only one is needed in the twenty-four-foot house illustrated. It should be placed half way between the east wall and the west wall and of course parallel to them. In long houses these partitions should be put in every twelve to fifteen feet.

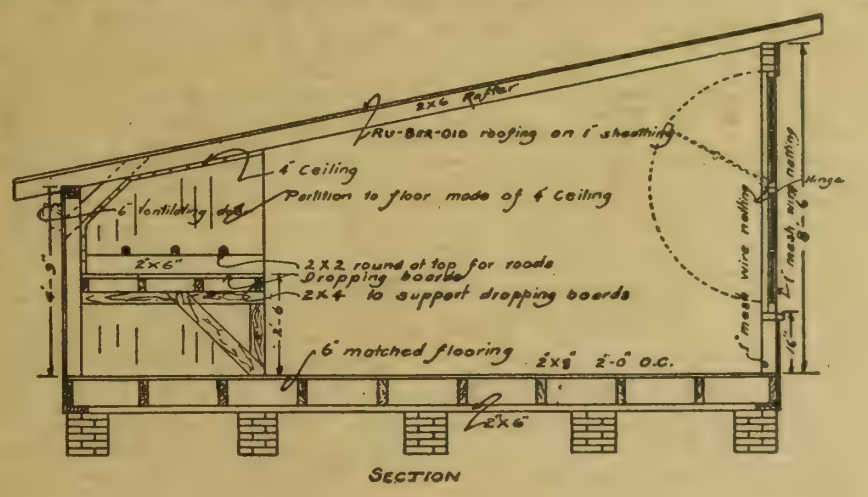
The dropping platform is four feet wide and two and one-half feet from the floor. The boards should run crosswise instead of the long way for convenience in scraping the droppings off in cleaning. If the dropping platform is made in sections these sections can be taken out of the house when it is desirable to clean and disinfect them.

All equipment, such as watering pans and feeding troughs, should be placed on platforms up off the floor for purposes of cleanliness and to economize on the floor space. The nests may be placed on the side walls or in front directly underneath the curtained openings.

Proper Height of Walls.

The front wall of the house shown in the plan is eight and one-half feet high. The rear wall is four feet nine inches high. This gives a rather flat roof, but it is alright where any of the prepared roofings are used. If the roof is covered with shingles the front must be higher in order to give a greater pitch so the roof will turn water. In sections of the state where the snowfall is heavy it is necessary to support a long, sloping roof of this sort with posts. In this house two posts spaced eight feet apart will be sufficient.

The floor may be made of six-inch matched flooring or of concrete, two and one-half inches thick. Dirt floors are not satisfactory unless puddled clay or adobe soil can be used. Dirt floors are usually too dusty. As a foundation brick or cement pillars can be used or the house can be placed on a solid concrete foundation. The door may be placed in either end or there may be two doors, one in each end.



SECTION

In building this poultry house the framing lumber throughout the building should be of the dimensions called for in the plans. Any lumberman will be glad to figure out the bill of material from the plan as illustrated.

It often happens that there are buildings already on the place from which lumber can be obtained to construct a poultry house of this type or a building which can be remodeled into a comfortable house in conformance with the plans. A house of this type may be constructed of brick, hollow tile, straw, concrete, or any other material available.

The houses to be constructed at Canon City for use in connection with the Colorado International Egg-Laying Contest will be of the type here described. This contest will open November 1, 1923. A complete bulletin on poultry houses is being prepared by the Colorado Agricultural College and will soon be available for general distribution.

Get Set for National Western Show.

Next on the list of big stock shows to which every stockman and farmer of the West is looking forward with the greatest of interest is the National Western Stock Show at Denver. This coming event, which is set for January 13 to 20, 1923, is the seventeenth annual show. It comes at a season when stockmen can take the time for a mid-winter outing and gain inspiration and encouragement from contact with one another and in seeing the displays of quality livestock shown. Livestock is the West's greatest asset and this show becomes a barometer of conditions, reflecting the various useful activities of business men of all classes. This show has grown in importance and influence to stockmen, ranchers, breeders, bankers and merchants each year and the auction sales usually set the prices for purebred livestock in its territory for the ensuing year. This year as usual there will be exhibits of cattle, hogs, sheep and horses from all parts of the United States, and buyers from a wide range of territory will be in attendance to take advantage of the various sales of stock which constitute a feature of the show. The 1923 National Western Stock Show will be the greatest exhibition of its kind the West has ever seen. This is already assured.

December 20 is the closing date for all livestock entries. Entries must be in the secretary's hands by that date or entries in the mail post-marked of that date. This rule is absolute, the only exceptions being the Poultry Show, Horse Show, Boys' and Girls' Club exhibition, and in the milking contest.

The premium list and preliminary classification is now ready for distribution. Copies may be obtained by addressing Harry Youngerman, General Manager, National Western Stock Show, Denver.

San Luis Valley Potato Show Scores Success

CUP FOR BEST REGISTERED SEED WON SECOND TIME BY O. F. DILLER

Alvin T. Steinel.

THE third annual San Luis Valley Potato show was held at Center, November 10 and 11, with every class filled and keen competition evident in both market and seed potato exhibits. There was a good attendance and the judging was closely followed by growers who are turning the show to educational account. Prof. H. D. Locklin of the Horticultural Department of Colorado Agricultural College judged the show and gave eminent satisfaction.

Close Contest on Trophy Cup.

The big event in the judging was the award of the Denver & Rio Grande Western silver trophy cup for the best registered seed exhibit. This was won by O. F. Diller of Rio Grande county, who was the winner in 1921, and therefore becomes the permanent possessor of the cup. Mr. Diller won first on registered Peach Blows and Brown Beauties, while first in Russet Burbanks went to Sauder & McFee. On the final judgment for the best registered seed between these three exhibits Mr. Diller won with Brown Beauties by seven points. Not until every single potato had been handled and carefully scored by the judge in these three exhibits was the final decision reached.

Registered Seed Interest Grows.

The San Luis Valley growers are making a specialty of registered seed potatoes and they have put the business on a scientific basis. The annual show is the occasion for comparisons in which only the practically perfect seed spud survives, and the winner of the cup in such a contest feels that he has accomplished something worth while.

Following the judging there was a ceremony at which Mr. Diller was crowned Spud King of the San Luis Valley. The honor of Queen was conferred upon Lennah Baxter, who was voted the most popular girl in a contest conducted in connection with the sale of banquet tickets. The Potato banquet was attended by over 400 persons, taxing the capacity of the gymnasium of the big Center Consolidated school, where the show was held.

Improving Quality of Market Potatoes.

Growers of Saguache, Rio Grande, Conejos and Alamosa counties co-operated in making the show a success. It has become a fixed annual event in the Valley and as a result there has been considerable improvement in the quality of market potatoes and a decided impetus to the production of certified seed for use on Valley farms as well as for sale to other potato growing districts of the West. In the present year of low values on potatoes, growers of certified seed are finding that side line a good source of income.

Following are the complete awards:

Standard Varieties.

Class 1—Brown Beauties—1, Mrs O F. Diller, Monte Vista; 2, O. F. Diller, Monte Vista; 3, W. W. Harper, Monte Vista; 4, Henry Specker, Monte Vista.

Russet Burbanks—Mrs. L. B. Finnegan, Del Norte; 2, L. B. Finnegan, Del Norte; 3, Corbin Wright, Monte Vista; 4, Sauder & McFee, Center.

Peach Blows—1, Sauder & McFee; 2, Carl Diller, Monte Vista; 3, Everette Irons, Center; 4, Mrs. W. O. Sauder.

Irish Cobblers—1, Joe Clark, Monte Vista; 2, Hindes & Appel, Monte Vista.

Class 2—Brown Beauties—1, Henry Specker; 2 and 3, Charles Mahl, Monte Vista; 4, O. F. Diller.

Russet Burbanks—1, L. B. Finegan; 2, E. A. Thompson, Del Norte; 3 and 4, L. R. Chisholm, Del Norte.

Peach Blows—1, 2 and 3, Fred Claussen, Center; 4, Sauder & McFee.

Irish Cobblers—1, no award; 2, Hines & Appel.

Semi-Standard Varieties.

Class 3—Bliss Triumph—1, Joe Clark; 2, Mr. Claussen.

Rurals—1, Fred Kernen, Del Norte; Mrs. Emelia Torres, Del Norte.

Early Ohios—1, J. F. Packard, Romeo; 2, J. E. Kernen, Del Norte; 3, C. R. Robinson, Del Norte; 4, E. A. Thompson.

(Turn to Page 22.)

Market Outlook for Farm and Ranch Products

CONDITIONS POINT TO BIG RUN OF HALF-FAT CATTLE IN JANUARY

Edited by Glenn G. Hays.

TRANSITION stages in the cattle market brought a decidedly uneven trend last week. The fall clean-up is far along at some points, but at others it is at its height. The proportion of low grades and pasture odds and ends rushed in ahead of cold weather varied accordingly. At Chicago another flood of short-feds arrived and the supply of all classes was the largest in two years. Well finished sorts were the scarcest of the season and another load sold at $13.60, equalling the previous high mark of the year, but cattle fed only sixty to ninety days lost 25 to 40 cents. Beef cows and heifers were weaker except for those in high finish. Veal calves declined 50 to 75 cents, with competition from poultry a factor.

Western rangers evidently were delayed by the car shortage as the run is holding up later than usual. The proverbial habit of the western cattle industry to "come back" after a period of disaster is indicated by receipts of 224,114 head at Chicago up to November 15, compared with 130,698 head to the same date in 1921.

At present the market is deluged with partly finished cattle while prime steers are rare, hence the abnormal spread. Drawing together of the two ends of the price list is probable in the next three months. But little benefit can come from holding long-fed steers at this stage, but cattle that have been merely started on feed will not sell well now.

Conditions still point to a big run of half-fat steers in January, when those who do not feed regularly are apt to come back to market. The general level of prices will remain fairly high, but the tone is apt to be weak until the winter liquidating period is over. Dressed beef trade is in fairly good shape, but shows occasional signs of indigestion.

Feeder Shipments Falling Off.

Demand for stocker and feeder cattle has abated to some extent, while the supply has held up at points to which the western range has contributed freely, so that prices have sagged. A drift to cheap light cattle has been noticeable recently.

The total number on feed is above normal and probably the largest on record. Shipments to the country from twelve leading markets in the fifteen weeks ending November 10 totalled 2,057,937 head, compared with 1,381,145 last year and 1,250,537 two years ago.

Hog Prices Nearing Bottom.

Action of the hog market indicates that prices are nearing bottom, although it is unlikely that the low point has been reached. On every dip big packers buy freely, current prices for hogs and product seem to be affording a profit to killers, eastern shipping demand is picking up in the Middle West and a run of around 700,000 head at the eleven leading markets last week, which was an increase of nearly 110,000 head over the preceding week, was absorbed at a minor decline. A few packers' droves were put up at Chicago below $8, but the daily average has held above that figure. Demand promises to become increasingly active on each decline from this level.

Overseas movement is running heavier than last year and stocks abroad are light. England is buying hog meats and the Continent shows great interest in the lard market. Accumulation of product had not begun at Chicago up to the middle of November and this presumably is representative of conditions elsewhere. Stocks of lard are unusually low.

Average weights are running higher than in any recent year and about 8 per cent above the average pointing to the generous use of feed during the summer and early fall, and possibly to holding hogs back a little longer than usual.

Feeder Lamb Movement Above Expectancy.

Shipments of feeder lambs and sheep from the twelve leading markets in the fifteen weeks ending November 10 totalled 1,834,553 head, compared with 1,[illegible] head last year, and 1,868,025 [illegible] two years ago. Apparently, the number on feed in the cornbelt and in Colorado is practically equal to the average based on records extending back [illegible].

Finished lamb prices were higher last week but the fat lamb market did not respond, as eastern shippers were inactive. Packers maintain a bearish front as the holiday season is not favorable for dressed lamb trade.

Wool Market Quiet But Strong.

The wool market is quiet, but prices are firm and the trend is upward. Transactions have been confined mostly to Texas fall shorn wools which are now moving at a high level. There are rumors of attempts to contract next spring's clip in the west, but no actual deals have been reported. Foreign auctions show an upward trend.

Wheat at Season's High Point.

Continuation of brisk domestic milling demand for wheat, together with moderate sales for export, have lifted wheat prices to a new high point for the season.

Just how long the demand from mills will continue is not clear. Evidently the invisible reserves of flour have been allowed to run extremely low in the last year or two, and these are now being replaced. Milling demand may taper off before long as inventory time approaches, but this loss can be offset easily by a lighter movement from farms.

Receipts at Winnipeg have dropped off slightly, although they are still heavy. Shipments from the head of the lakes totalled 102,000,000 bushels for the season to November 10, compared with 67,000,000 bushels last year. The way the market holds up in the face of the big receipts is the best of testimony as to the demand.

Export demand shows little change. Manitobas still have the preference with most buyers, although clearances from the United States are running heavy enough to clean up our surplus if continued through the rest of the crop year. Most of our foreign business has been in durum, which relatively is the cheapest wheat in the world. The British grain trade recognizes the possibility that North America will not be able to ship so freely when navigation closes, hence is disposed to buy steadily while Canadian can be had in large amounts. An effort is being made to get as much North American wheat as possible in storage at eastern points for winter shipment.

Political uncertainties have interfered with sales to Europe, but developments in Germany, Italy and England in the last few days point to greater stability than heretofore. Latest reports to the Department of Commerce place the total crop in Europe exclusive of Russia at 194,000,000 bushels less than last year. This shows some increase in crop yields over a month ago, but means much larger imports than last year in spite of the extensive use of substitutes. Unofficial estimates on the Australian crop have been raised about 30,000,000 bushels.

The situation after January depends more or less on the procedure of Argentine and Australian growers. Already foreign interests are beginning the old game of playing off Argentine wheat against North American. A few sales to be filled from the new Argentine crop, harvesting of which has just begun, have been made, but these presumably are entirely speculative. Speaking broadly, based on past records, Argentine growers are not likely to sacrifice their surplus even though it is a large one. There is a possibility that the Australian crop will be handled by means of a government pool.

Big Export Business in Rye.

Germany alone is believed to have bought 40,000,000 bushels of rye in North America this season and is still buying. Large sales have been consummated in the last few days in spite of political disturbances and the depreciated mark. Probably three-fourths of the calculated surplus from the United States has already been exported or sold for later shipment.

Corn at New High.

Although export demand for corn has practically ceased because of low offers from the Argentine, domestic feeding demand has been brisk and prices for future delivery reached the highest point since the early spring of 1921. The South, the Southwest and the West from Colorado to the coast are buying in Iowa and Illinois and other surplus states and outbidding the terminal markets which also are blessed with a good demand. The eastern demand appears to be filled up for the present.

That the market is doing so well on the eve of the movement of the new crop points to well-sustained prices right along, although setbacks are to be expected occasionally. Under the conditions it will be no surprise to see corn reach 85 to 90 cents at Chicago in the next eight or nine months.

Demand for oats also is broad and it is too late to expect a big movement from farms. The visible supply at terminals is steadily shrinking. Much higher prices for this grain are to be expected before next harvest.

Cash Grain Markets.

The range of cash grain prices are as follows:

Omaha—Wheat, No. 2 hard, $1.15@1.19; No. 3, $1.13@1.17.

Corn—No. 2 mixed, 68@71½c; No. 2 yellow, 69@73c; No. 3, 69@72c; No. 2 white, 68½@71½c; No. 3, 68@69c.

Oats—No. 2 white, 44½@46c; No. 3, 43¼@45¾c.

Rye—86½@93c.

Barley—62@70½c.

Kansas City—Wheat, No. 2 red, $1.13@1.18; No. 3, $1.08@1.12; No. 2 hard, $1.15@1.25; No. 3, $1.14@1.25.

Corn—No. 2 mixed, 73@74½c; No. 2 yellow, 74@76c; No. 2 white, 73@75c.

Oats—No. 3 white, 44½@46c.

Barley—64½@66c.

Hay Market Stable.

The hay market is a stable affair with a moderate demand offsetting light shipments due to a car shortage and stormy weather in surplus districts. Prices are apt to go higher rather than lower.

Prices per ton in carlots:

Kansas City—Prairie upland No. 1, $13.50@14.50; No. 2, $11.50@13; alfalfa choice, $25@26; No. 1, $23.50@24.50; standard, $20@23; No. 2, $17.50@19.50; No. 1 timothy, $14.50@16.50; No. 2, $12@18; No. 1 light clover-mixed, $14.50@15.50; No. 1 clover-mixed, $12.50@14; straw, $8.50@9.

Feed Market Slightly Easier.

Contrary to the tone in feed grains, the by-product feed market is slightly easier. Demand is said to be limited, but it is probable that heavy offerings explain most of the (Turn to Page 23)

Grow Into the Dairy Business

MILK COWS CONVERT BULKY FEEDS INTO QUICKLY MARKETABLE PRODUCTS.

Earl G. Reed.

WHILE the market for more than 50 per cent of the dairy products of the United States is found in the New England States, more than 50 per cent of the dairy products of the country are produced in the part of the United States west of Michigan and north of the Oklahoma state line.

This clearly shows the possibilities of marketing a concentrated product from the farms. In 1880 the center of dairy production for the United States was in middle Ohio. Today the center of dairy production is in western Illinois at about the junction of the states lines of Missouri and Iowa. Dairy production is moving westward because dairy products offer a most practical and concentrated form of marketing the hay and grain and roughages of the farms in the middle western states. Butter, cheese and other dairy products can be shipped around the world, but the feeds that went into their production can be shipped comparatively short distances. They are too bulky.

Dairy Cow a Factory.

The dairy cow is a buyer of feeds, an economical converter of bulky feed and labor into a quickly marketable product. Feeding various crops and roughages to dairy cows of ordinary production and marketing the crops through the "Dairy Route", when whole milk is selling for $1.40 per hundred pounds and butterfat is bringing about 25 cents a pound, would mean a return value of about $12 a ton for corn silage, $15 a ton for alfalfa hay, $2 a hundred pounds for oats, $3 a hundred pounds for corn and $2.50 a hundred pounds for barley. By feeding dairy cows, the fertility so necessary to good crop production remains on the farm and the farm is not only maintained in fertility but is actually improved from year to year. Dairying to be successful must be made permanent. It is not a business or a farm enterprise that can be entered today and dropped tomorrow with expectations of making big profits for a short time. It is not a speculative proposition and should never be so considered. The milking of cows offers something of a permanent nature with reasonably good rewards for labor and certain assurances of success where it is followed consistently, diligently and with the idea of making it a permanent part of the farm work. It should be the main, or one of the main farm enterprises—and was never intended for a side line or a "happinstance."

Dairying should be made a permanent enterprise on the farm even though only a few milk cows are kept. It does not pay to enter the dairy business for a year or two. It should be planned ahead for years. Dairying cannot be temporary and be successful. The "in and outer" in any business is not a success, he is usually in when he ought to be out and out when he ought to be in. He is bucking his own interests, is against everybody and himself in particular. The farmer who makes a success of dairying like everything else, is the one who stays with it consistently year in and year out. Wisconsin today offers the best example of the results of permanent dairying. Wisconsin farmers fifty to sixty years ago were forced into the dairy business to pay their grocery bills and keep their families clothed. Today they are the most prosperous of any farmers as a state of any in the United States, but it took work, patience and careful planning with the plans well carried out. Grow into the dairy business, do not buy into it.

Dairy in Its Infancy.

The dairy business in the west is barely started and only in its infancy in the United States. The Netherlands has today 154 cows per square mile, Denmark 147, Switzerland 60, and the United States only 8. Our competitors in the dairy business know the meaning of economy and are able to keep a large number of animals on a small area. We have much to gain in the way of production in order to build our dairy business up to a higher standard. The average production of dairy cows in the Netherlands is 7,585 pounds of milk per year. In Switzerland it is 6,950, in Denmark 5,666, and in the United States it is only 3,527. Economy and competition demand improvement in our herds.

The dairy business can be improved and built up in this country by using better sires—only purebreds, by reducing the costs of production through better care and feeding methods, and increasing the carrying capacity of our pastures. Increasing the sales from the dairy through the offering of higher quality products and informing the public through advertising of the value of milk and dairy products in general will greatly benefit the industry. The dairy business will grow and with it the prosperity of the farmers thus engaged. Cooperation, higher goals in production, economy and quality are necessary.

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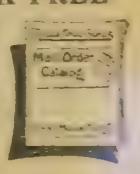

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Last Call for Farmers' Week.

If you have not already made your plans to spend at least a part of the week of December 11 to 15 at Fort Collins, we would urge you to get busy and see if you cannot figure out some way to take advantage of the excellent program prepared. This is to be Farmers' Week at the Colorado Agricultural College and everything possible has been done to make it a profitable and entertaining week to those who can attend.

The star attraction for Wednesday, December 13, will be an address by Governor-elect William E. Sweet. This has been designated as Governor's Day and agricultural policies and matters of legislation will be discussed by the incoming Governor with representative farmers of the state. Governor Shoup and Ex-Governor Ammons also are on the program. Governor Henry J. Allen of Kansas, who was to have had a part in the program that day, has just sent word that he cannot attend.

Another address which will be of the greatest value to our readers is that to be given December 14 by H. C. McKenzie of Walton, N. Y., on the subject 'Taxation." Mr. McKenzie is the tax expert of the American Farm Bureau Federation and has a profound knowledge of this subject, particularly as applied to agriculture. In addition to the special addresses scheduled, the college is making it possible for the farm men and women to attend classes in home economics, agronomy, animal husbandry and poultry raising.

Boosting for Better Livestock.

There is no doubt in the minds of stockmen who are keeping up with the times, that a better class of animals must be raised more generally if the livestock industry is to take its rightful place. All over Colorado and the mountain regions groups of progressive farmers and ranchmen are getting together in a co-operative spirit to promote interest in better stock. Huerfano county breeders are getting in line and have planned a stock show at La Veta for December 15 and 16 in order to do their part in carrying out this program of boosting for better practices in livestock production. They plan to make this the big livestock event of southern Colorado.

We heartily commend this effort being set forth by these forward-looking men. While breeders of the county are all putting their exhibits of cattle, hogs and horses in shape for showing to the best advantage, they are not excluding outside competition. The Huerfano stockmen are rallying to the slogan of "Nothing But First Premiums to the County Exhibits," but the competitive spirit is aroused and while they desire success for the home breeders in the showing they welcome outside competition. This is a most commendable spirit for it will mean more in the long run in promoting the show and the interest of improved stock generally than a program which puts a fence around the local community in order that all the premiums may remain at home. Recently it has been announced that two carloads of show cattle will be entered from the Monte Vista community.

A feature of the show will be the showing of feeder cattle. Cattle buyers looking for the right type animals to fill corn-belt feedlots are going out to where the cattle are grown. Ohio feeders have been doing this very successfully and their representatives will be on hand at this show to meet the stockmen and look over their cattle. The producers feel that they should be able to build up a trade in feeder cattle right at the home yards. It seems to be an idea well worth working out.

The social features of an event of this kind have not been overlooked. Getting better acquainted with each other always is in order when a group of men try to work out a program requiring co-operative effort. A banquet will be given at this La Veta show the night of December 16, at which Ex-Governor Ammons will be the principal speaker. Eating together has always been looked upon as a ceremony leading to good fellowship. Following the banquet the social part of the program will be continued in the form of a dance.

To show their interest in the program of livestock improvement the Southern Colorado Livestock Association, with headquarters at Trinidad, voted to attend the La Veta show in a body and hold their next regular meeting there the evening of December 15.

Farm Jobs for Ex-Service Men.

Ex-service men are applying to the Ex-Service Men's Employment and Relief Association for farm jobs. Perhaps some of our readers may be looking for help. This organization is a branch of the American Legion. It maintains a free employment office and furnishes relief to ex-service men and their families. Only able-bodied men are cared for by this association. Last year 1,352 men were given temporary employment. Just at present a number of men are calling for farm work. Only men who have had experience on farms are listed for this class of employment. It is the policy of the management to investigate all men applying so as to be able to recommend them for the kind of employment in which they may be expected to make good. W. L. Mead, who is manager of the organization, is anxious to locate men on farms or ranches desiring help. He can be addressed Room 5, Evans Block, Denver.

Farmers and Freight Rates.

President J. R. Howard of the American Farm Bureau Federation is authority for the statement that of a total income of $10,976,000,000 the farmer's railroad bill is approximately $1,123,000,000. The railroads have answered by saying that of this total $800,000,000 a year is freight rates and that this amount is only 8 per cent of the farmer's total expenditures. Therefore, argue the railroads, the farmer should put most of his attention on the things other than rates which consume 92 per cent of his total expenditures.

The railroads should not feel that they are bearing the full brunt of the farmer's reaction to the economic crisis, but only their proportionate share, declares Transportation Director C. B. Hutchings for the Farm Bureau. "The expenditures of the American Farm Bureau Federation indicate very clearly that the farmers consider the level of freight rates as one, but only one of their difficulties," says Mr. Hutchings. "Of the total expense of maintaining the national organization the Transportation Department is spending less than 4½ per cent."

State Potato Club Champion.

"Make Your Better Best," is the slogan of the boys' and girls' club work. Persistence in the practice of this motto resulted in making Fred Diller of Monte Vista, State Potato Club champion. Fred, who is now fourteen years old, has been in the potato club work for three years. At the Saguache county fair he took second place on a sample of Brown Beauties. He was not satisfied with this and made up his mind that he would look his spuds over a little more closely and go after a higher place at the San Luis Valley Potato Show. His efforts were rewarded, for he took first place in the Potato Club and Smith-Hughes class on his exhibit of Brown Beauties, and also won the sweepstakes in the non-registered seed competition. He entered this same sample at the State Seed Show held in Colorado Springs and here also was successful, winning first place in the Brown Beauty classification over his father, who had been crowned Potato King at the San Luis Valley show. His exhibit also was awarded the sweepstakes prize and he was declared the state champion potato club member. A silver loving cup offered by Western Farm Life goes to him as a souvenir of this championship award. We are glad to give public recognition to work of this character.

Agricultural Legislative Demands Vindicated

While various interests are trying to find out how they stand and what they have lost or gained as a result of the elections, the farmers might congratulate themselves that the full membership of the farm bloc in both House and Senate has been returned by a safe majority. This may well be taken as a complete vindication of the legislative program of the bloc and the various farm organizations backing it, and proof that this legislation is in line with public sentiment.

The power exercised by the farm bloc is a new force in national legislation. Last summer when the administration decided Congress must adjourn without giving consideration to the various agricultural bills up for consideration, the word went out to Senator Lodge to line up the Senate for this program of adjournment. Senator Lodge found he was up against a new element in politics. The agricultural forces got to work and when it came to a vote the adjournment resolution was lost. Senator Penrose was next appealed to and he likewise failed. With the resolution on his desk he retired to his room without even presenting it after receiving the report that a poll of the Senate showed it could not pass. He recognized that his days of leadership were over.

The President next sent for Senator Kenyon, then leader of the farm bloc. It was a recognition of this new force which was upsetting the old established machinery with which the party leaders were familiar. The result was that of the twelve bills affecting agriculture, some of which farmers had been trying for fourteen years to have enacted, six were given the right of way and were passed in the six weeks before Congress adjourned, August 25. It must now be recognized that this banding together of the agricultural interests in Congress is the strongest legislative power now operative in our national law-making body.

Reinstatement of Government Insurance.

During the period we were engaged in the World War four and a half million men and women who were in active service applied for and were granted insurance. On release from service a very large majority of these dropped the insurance notwithstanding the very liberal provisions for converting the term insurance being carried into some of the various forms of policies such as 20-pay life, Ordinary life, Endowment, etc. Providing for life insurance seems to be one of the things which we habitually neglect unless fairly driven to give it consideration, and yet there is nothing more certain than death or some form of disability. When we insure a residence property against fire, statistics show that of 1,260 houses insured 1,210 will be standing intact after fifty years. On the other hand, of a hundred men starting out in life at twenty-five years of age, one will be wealthy at forty, four will have incomes, five will have some earning power, thirty-six will be dead, and fifty-four will be dependent on relatives for charity. There are without doubt among the readers of Western Farm Life ex-service men who have neglected to properly protect their earning power while the opportunity is open. Would it not be wise to look into this matter and take the necessary steps to protect dependent ones in years ahead while able to do so? Many have doubtless let insurance drop because of failure to realize their rights and priviliges under the War Risk Insurance Act. The most liberal reinstatement privileges are offered and we feel that it would be a real service to any war veteran to use what influence we may have to induce him to attend to this most important duty. An inquiry addressed to the U. S. Veteran's Bureau, Washington, D. C., giving the ex-service man's name, full address with certificate and serial numbers, rank and organization when discharged, will bring full information relative to reinstatement of his insurance.

The necessity for accumulating more than one summer's moisture in wheat production has been conclusively shown this past year. Practically all over Colorado precipitation has been below normal. It has been a good year in which to test out methods of growing crops on limited rainfall. Such a season proves that some form of efficient summer tillage which will keep down weed growth and serve to accumulate a reserve moisture is a necessary feature of farming in areas of limited rainfall.

It costs just as much to sell, both wholesale and retail, unidentified, unstandardized fruits and vegetables at low prices, as to sell the standardized, advertised products at the best market prices.

He who would look with contempt upon the farmer's pursuit is not worthy the name of a man.—Beecher.

From the Nation's Capital

PRESIDENT WILL TRY TO FORCE SHIP SUBSIDY BILL THROUGH THIS CONGRESS.

E. E. Reynolds.

CONGRESS is again in session after a brief recess, called by President Harding for the purpose of passing the ship subsidy bill. The President is determined that Congress shall put this bill through, regardless of a steadily increasing opposition, not only to ship subsidy, but to subsidies of all kinds to special interests. He evidently realizes that unless the ship subsidy bill can be enacted into law before the end of the Sixty-seventh Congress, there is little hope for it. It is well known that the next Congress will have fewer ship subsidy votes than the present. It is also understood that the sales tax will have fewer supporters in Congress after March 4. In spite of the President's desire to secure a modification of the surtaxes it is probable that these taxes will be increased.

While ship subsidy will have the right of way, the farm organization representatives will make a strong fight to secure the enactment of the bill providing for the acceptance of the Henry Ford Muscle Shoals nitrate plant offer, the truth-in-fabric, anti-filled milk, standard container and other pending bills affecting the interests of the farmer.

It is the belief in Washington that the impetus given the progressive movement by the recent election will strengthen the position of agriculture in Congress. Senator Smoot of Utah, one of the foremost conservative majority leaders in the Senate, says the farm bloc will be a dominant element in legislation during the next Congress.

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Rural Credits Bill Will Be Discussed in Congress.—There will be much discussion of the various rural credits bills and plans in Congress this winter, but little will be accomplished until the advocates of rural credits get together upon one definite proposition. It is the opinion of Eugene Meyer, Jr., director of the War Finance Corporation, that the rural financing plan which will furnish the best solution is one which takes care of the financing of co-operative marketing organizations through existing financial machinery by modifying the laws governing the eligibility requirements of the Federal Reserve system, and the financing of the livestock industry by amending the National Banking Act so as to authorize the creation of Federally chartered loan companies, operating with private capital under the supervision of the Comptroller of the Currency or the Federal Reserve system. This plan is based upon the principle of utilizing existing machinery and local capital to the fullest extent consistent with sound policy.

Mr. Meyer holds the belief that if the necessary adjustments are made in the eligibility rules of the Federal Reserve system, there is every reason to expect that the banks will do their part in the financing of co-operative marketing associations. He declares that the producer himself must find ways and means of carrying his product and marketing it gradually.

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No Change in Government Departments.—The reorganization of the various government departments will be abandoned by the President, according to recent information from the White House. Very strong opposition to the reorganization program has developed and there is little chance of the scheme being endorsed by the present Congress and practically no chance in the next. Secretary Fall of the Interior Department is still keeping up his fight for the 186,000,000 acres of forest land now controlled by the Department of Agriculture, and Secretary Hoover wants to annex the marketing and statistical part of the Bureau of Agricultural Economics to the Commerce Department, but it now looks as if their efforts in this direction were fruitless.

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Government Wool Grades Being Accepted.—The final hearings on the proposed United States grades for wool which have been formulated and distributed under the name of tentative wool grades by the United States Department of Agriculture, are now being held, one being announced for Chicago on December 6.

These tentative grades which were developed in the Bureau of Agricultural Economics, have been generally accepted by the trade. Practically all of the wool in the state wool pools has been graded under these grades. When it was first proposed to establish wool grades the trade said it could not be done. The plan has worked so successfully that in several instances lots of wool have been purchased on the government standard grades in Arizona by eastern buyers by telegraph.

Wool from the South Dakota state pool was sold recently through a Chicago warehouse. The president of the South Dakota Wool Growers' Association reports to the United States Department of Agriculture that his organization received an average of 48 cents a pound, compared with 25 cents offered by local buyers.

The new wool tariff is giving much encouragement to the sheep industry in the eastern states. If assurances were given that the present tariff rates would remain on the statutes a considerable number of years, it is predicted that much of the abandoned lands in the East would be converted into sheep pastures, and that a large sheep industry would be developed. Many thousands of sheep could be kept on New York and New England farms without interfering with the dairy industry to any extent.

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Farm Bureau Obtaining Registration of Trade-Marks at Cost.—The Washington office of the American Farm Bureau Federation is prepared to secure the registration of trade-marks for agricultural co-operative marketing associations, co-operative packing houses, and farmers, at actual cost of service.

The Farm Bureau representatives say that the trade-mark registration is a certificate from the commissioner of patents showing that the registrant has used the mark in commerce and is prima facie entitled to its ownership. In case a rival concern uses the registrant's trade-mark the latter can seek and probably without delay secure an injunction against his rival, whereas without such registration the case would have to be carefully proved before the court would grant a restraining order.

The Inwood Fruit Growers' Association of West Virginia was the first to take advantage of the Farm Bureau Federation's trade-mark registration service. The Inwood trade-mark is known as the "Johnny Apple-seed Brand," the name being that of a historical character who planted apple seeds along the old trails of West Virginia, Ohio and Indiana in the early settlement days.

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Letting Down Immigration Bars Opposed by Farmers.—A movement to secure the repeal of the immigration limitation law is showing some strength. The propagandists who are promoting this move are asserting that there is a shortage of unskilled labor in the cities, which should be supplied by immigrants from Italy, and they also claim to see a food famine ahead in this country unless immigrants from Europe are brought in to develop new farms and provide cheap farm labor. This movement is not being promoted by farm organization representatives, for they are evidently of the belief that our American farmers already have enough competition in food production without bringing in a horde of people from southern Europe, whose standard of living is lower than that of our American farmers.

Speaking of the immigration law limiting the number of immigrants from each country, a representative of the United States Department of Labor says: "The operation of the law has had an interesting effect on the proportion of immigrants coming from the different sections of Europe. While in the fiscal year 1913-14 only 15 per cent of the immigrants came from northern and western Europe, and 85 per cent from southern and eastern Europe and Asiatic Turkey, in the past fiscal year 36 per cent came from northern and western Europe, and 64 per cent from southern and eastern Europe and Asiatic Turkey. Although the change in this respect is not all that might have been anticipated because of the relatively small number who have come from the old sources, nevertheless, the fact that the proportion coming from such sources has increased from 15 to 36 per cent is a pretty clear indication that the law is accomplishing what it was intended to accomplish in this respect."

Wool Pool for Colorado.

At the meeting in Pueblo some very definite plans were outlined for the final organization of the wool pool in Colorado. The most important thing at the present time is the working out of a wool growers' contract that will adequately safeguard the interests of the wool producer and make the administration of the wool pool consistent with the best business practices.

The meeting was attended by a number of the largest wool growers and others interested in the wool pool and unusual interest was shown in completing the plans. It is predicted by the sheep men that a large majority of the wool grown in Colorado will be voluntarily signed up as soon as the contracts are available.

The value of the wool pool to the wool industry of Colorado can not be estimated at this time. Actual conditions, as they are shown, emphasize the great need for the pool. In addition to the advantages of a wool pool in the grading, marketing in large quantities, price advantages, etc., one of the chief advantages is the producing of a better grade of wool in Colorado. This can be brought about and encouraged through the successful operation of a pool better than in any other way. At the present time wool from other states is bringing as high as 5 cents a pound more than Colorado wool, from the fact that the inferior breeds of sheep used on the Colorado ranges produce an inferior quality of wool. When the sheepmen know that they will be paid for their wool according to quality there will be more incentive for improving their flocks.

Must Have Farm Loan Increase.

Increasing the loan limit of the Federal Land Bank, now before Congress on an amendment to the Farm Loan Act, is regarded as the most important single measure to come before the next session of Congress. The American Farm Bureau Federation is placing this measure as the very first plank in its legislative program. The farm bloc will insist on the passage of such an amendment.

All advices received at the offices of the American Farm Bureau indicate that conditions in the country are exceedingly critical. Because credits have been eased in industrial circles is all the more reason why agriculture should insist on financial justice. Farmers are not paying their debts, and cannot pay them until farm prices reach a fair level with other prices. Delinquents in the Federal Land Bank are double what they were the last year at this time. It is intolerable to think of going through to another March with the Federal Land Banks so hobbled that they cannot take care of the farmers who need credit, driving them to pay exorbitant interest rates to private capital. Write your Senator. Write your Congressman. Write the American Farm Bureau Federation, 58 E. Washington St., Chicago, Ill.

Have You Old Copies of Colorado Farmer?

A call has come to us for copies of Colorado Farmer covering the early seventies. Much of the early agricultural history of Colorado was written through these issues of the old Farmer. The early development and history of the Colorado State Grange run through its pages. D. W. Working, one of the Past Masters of the State Grange, is gathering material for putting in permanent form the history of the Grange in the state. He needs these issues to tell the story. Look in your attics and elsewhere if you preserved your papers and if you find any of these old issues report to Mr. Working, Capital Hill Station. Denver. Perhaps there may be bound volumes of the paper for these years. Mr. Working would like to learn where they are and be informed how he may have access to them.

Colorado Farmer was the first agricultural paper published in the state. It was established in the early seventies and after many vicissitudes was absorbed by Field and Farm in the late nineties. J. C. Febles was the first editor. Others who served in that capacity were J. S. Stenger and R. M. Edwards. In 1885 Mr. Working became editor and served two years. He was succeeded by W. E. Paber, and A. R. Logan was his successor. Mr. Working proposes to turn over to the Colorado Historical Collections complete files of the old paper if he can complete them.

Extension Specialist in Engineering.

Service in agricultural engineering is a new extension activity of the Colorado Agricultural College. The extension service recently announced the appointment of F. L. Cooper as specialist in agricultural engineering. Mr. Cooper has been serving as county agent of Conejos county. He is especially fitted by training and experience for the work of this new position.

Another change, following the resignation of Miss Miriam Haynes as state leader of home demonstration agents, is the appointment of Miss Maud Sheridan as organization specialist, the organization of the women's work of the state being in addition to her present duties as state club leader. The purpose of this change is to bring agout a better co-ordination of extension activities in the farm homes of the state through the club work and the clothing and nutrition work. A nutrition specialist is to be added to the force as soon as the proper person can be found.

Frank R. Lamb, who has been serving as secretary of the Colorado State Farm Bureau, has resigned his position, to succeed Mr. Cooper as county agent of Conejos county. Mr. Lamb has had agricultural college training and wide farming experience, including twelve years as owner and operator of a cattle ranch in Wet Mountain Valley, and in general farming at Penrose.

Death of Professor H. T. French.

Professor H. T. French, formerly director of extension of Colorado Agricultural College, died at his home in Corvallis, Oregon, November 5. Professor French was widely known in Colorado, especially among the farmers of the state. He was a native of Michigan and was a graduate of Michigan Agricultural College. He came west immediately after his graduation and taught agriculture in the Oregon Agricultural College. From there he went to Idaho in the same capacity, later being made director of the Idaho Experiment Station. He returned to Corvallis, Ore., in 1909, to take charge of farm demonstration work, and in 1915 came to Colorado as director of extension. He became seriously ill in 1919 and the following year was compelled to give up his work here and went to Corvallis, Ore. He was 61 years old at the time of his death.

World Radio Crop Service.

The international radio crop service of the United States Department of Agriculture got away to a flying start recently with the receipt of a radiogram from the Department's Berlin representative regarding beet sugar production in Germany. In less time than it takes to read this sentence, traveling with the speed of light—186,000 miles a second—the message filed in Berlin was flashed to the Department of Agriculture at Washington, D. C. Thence relayed throughout the United States, the news was in the hands of receiving operators all over the country in less than five minutes from the time the message left Berlin.

"Radio is revolutionizing the dispatch of crop news," said Dr. Henry C. Taylor, chief of the Bureau of Agricultural Economics in commenting upon the new service. "In these times of rapidly changing economic conditions instantaneous advices of agricultural conditions throughout the world is vitally necessary in the protection and advancement of American agriculture. We want to know not only what crops and conditions were last year, but what they are at the present instant. Radio makes this possible."

A part of the Department's service is the dispatch by radio to the International Institute of Agriculture at Rome of a weekly report on the condition of the cotton crops and wheat seeding in the United States. The messages are sent from radio stations of the Navy Department.

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Farmers' Service Bureau

Readers are invited to make generous use of this department. Questions regarding any branch of farming, livestock production, animal diseases, legal matters pertaining to the farm, homestead inquiries and the like cheerfully and promptly answered by letter and through the magazine. Address all communications to SERVICE BUREAU, WESTERN FARM LIFE, Denver, Colorado.

Lupines Valueless for Forage.

Would lupines be a profitable crop to grow on land in Montezuma county at an elevation of 6,500 feet? A wild plant grows here which seems to be a species of lupine.—R. H. B., Montezuma county, Colo.

In Europe lupines are grown as green manure crops, but are seldom used for hay. If used as forage they must be cut very young. They are not usually relished by horses or cattle and after a certain stage of maturity become poisonous. Waldo Kidder, extension agronomist of the Colorado Agricultural College, advises the growing of alfalfa, peas or sweet clover as the legume crop for this section. He states that these crops will do well with a reasonable amount of moisture. The seeding should be light.—G. C. W.

Variety of Corn for Silage.

For the last four years we have been raising the flint varieties of corn which mature for silage, but they do not make large enough tonnage yields. The improved Leaming is hardly early enough. This year we made a trial of Minnesota 13 and it seemed to do very well. What we want is a variety that will mature early enough for silage and at the same time give a large amount of forage. The altitude is about 6,000 feet. We plant corn about May 20 and usually cut it about the last of September.—F. F. D., Utah.

One of the best varieties that you could grow if you care for silage that is quite rich in grain is the Minnesota 13. An early selection of Iowa Silver Mine, Mexican June corn or White Elephant, will give you considerable larger tonnage and with a little careful selection you should in the course of a few years develop an early maturing strain from which you could save seed enough for your own use. E. H. Bader at Fort Lewis, Colo., may be able to supply seed of the Mexican June corn from the experiment station farm. You can get an early selection of Silver Mine or White Elephant from Francis B. Yeager, county agent of Boulder County, Colo., at Longmont.—Waldo Kidder, extension agronomist.

Cannot Remove House From Land.

Can I remove a house which I erected on rented land? It has no foundation—simply standing on posts. I have rented this land for several years. It was mortgaged and October 27 I was notified by the holder of the mortgage that he had foreclosed and wished possession March 1, 1923. I have drilled in sixty-five acres of wheat and have fifty acres more ready to sow. Can I be forced to give possession?—J. S., Washington county, Colo.

If you had an agreement with the owner to move the house off the land, you may do so before the end of the term. It seems to me your notice to move is ample, though of course I do not know how legal his form of notice was.—Hamlet J. Barry, Equitable Bldg., Denver, Colo.

County Agent Laws.

What are the laws under which county agents are employed? I have heard that an effort is being made to repeal county agent laws. Is this true? Do county agents have to be graduates of agricultural colleges? How are examinations held to determine an applicant's fitness for the position of county agent?—H. R. B., Montezuma county, Colo.

The state law gives county commissioners power to employ a county agent. The county agent is employed in cooperation with the State Extension Service of the Colorado Agricultural College, which acts both for the state and the United States Department of Agriculture in Washington. When money is available, the state and Federal government contribute $1,200 a year toward the salary of the county agent. The county pays the remainder of the salary and traveling expenses of the agent, and furnishes the office. The Extension Service in turn, furnishes specialists' help in various agricultural lines, and the United States Department of Agriculture co-operates with the state in furnishing supervisional help and assistance. When the specialists' service, and the supervisional assistance are added to the amount contributed to the salary of the agent, it is found in the average cases that the state and Government contribute about 50 per cent of the total expenses of the agent, or, in other words, the county goes fifty-fifty with the state and Government for the support of the county agent.

We know nothing of a bill before the legislature regarding the repeal of any laws pertaining to county agent work. It is not absolutely necessary that a county agent be a graduate of an agricultural college. However, it is preferable that applicants be graduates of an agricultural college, and have had five or six years of practical experience along farming lines, so that they may be better qualified for doing the work of county agent.

Examinations are not given in considering applicants for county agent positions. In place of the examination, very exhaustive references are required, and the experience, character, and general qualifications of the applicant are considered as a basis for placing the man.—Roud McCann, Director Extension Service, Colorado Agricultural College.

Obtaining Federal Farm Loan.

We have 160 acres of farm land in the mountains on which we wish to obtain a Federal Land Bank loan. There is a man here who represents a Federal Loan Bank, but he says we have to have an application made out by him which will cost $25 and in addition pay $15 to the appraiser. Is there any way I can get in touch with a farm loan association and obtain the money without so much expense?—D. S., Boulder county, Colo.

The only way I know of to obtain a Federal Land Bank loan is through a local farm loan association. I am forwarding a copy of your letter to the Federal Land Bank at Wichita, Kan. You should receive from them full information.—G. C. W.

Causes of Sheep Losses.

Our sheep are dying. We have lost 3 per cent of them during the past month. We first notice one or two off by themselves in the morning and they most generally die before night. The paunches seem full of feed and packed. Their mouths and eyes turn greenish. I have given them castor oil and turpentine, but apparently without producing any good results. The sheep were on the range all summer up to the first of October. They were grazed on the meadow and pastures after we brought them home, where there was plenty of grass, sage brush, and oaks. They have had plenty of salt and water.—W. E. T., Routt county, Colo.

We have a special experiment station project at Fort Collins on "Sheep Losses in the Feed Lots," and if you were not so far away we would make a special investigation of your troubles.

You have made no mention of symptoms or lesions, further than finding the paunch packed with feed. Possibly your sheep are dying from constipation as a result of eating rabbit-weed, sage, leaves of scrub oak, or something of that nature. In this event, large doses of raw linseed oil should save them. Look to the quality of their feed and the water supply.

There is some loss of sheep from hemorrhagic septicemia, in which case there will be found hemorrhages under the skin and other parts of the body. Also there might be slight bleeding from the nose and blood mixed with the feces or urine.

Lastly, there is the possibility that it may be poisoning from the whorled milkweed. You are in the milkweed area and animals are easily poisoned on the dry weeds mixed with the hay. We are sending you a bulletin on the whorled milkweed.—G. H. G.

Cancellation of Farm Lease.

Am I compelled to remain on a ranch I leased for three years after I find misrepresentations were made in several respects. Notes were given for the rent. The owner stated that water would be available for irrigation once a week. During the first year we have not had water once a month. This was not written in the contract, but the statement was made in the presence of witnesses. Other verbal promises have not been met by the owner. Can he force collection on my notes beyond the first year's rent if I vacate the place?—E. R. L., Pueblo county, Colo.

You could bring a suit to cancel the lease. If the notes in payment of the rent are past due and in the hands of the lessor, you could defend a suit on the notes on failure or partial failure of consideration. The notes are good on their faces and could be collected unless you protected your interests.—Hamlet J. Barry, Equitable Bldg., Denver, Colo.

A tasteless strychnine for use in destroying rodents, devised by the Bureau of Biological Survey at Denver, is proving more efficient than the old formula.

The First American

By ALBERT PAYSON TERHUNE

A NOVEL
In Eleven Chapters.

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(Continued from last issue.)

At sight of his accomplice and of the latter's terror, the chevalier's hasty speech died unspoken. A quick reflection of the other's fear crossed his florid face. Then, with a gesture not lacking in dignity, he faced the cardinal. His red, angry face was again calm; his bloodshot eyes were steady.

"I am here!" he said calmly.

Old scoundrel as he was, I could not but admire his courage. It was as safe for him to enter a den of famished lions as to stand thus in Richelieu's presence.

"It occurred to me," purred the cardinal, "that as M. des Ems called upon you a little too late this evening, and as high words passed between you, this would be a good time for me to act as peacemaker. Chevalier, it was not the marquis' fault that he did not arrive at your house early and with this snuff-box."

De Sieux's eyes bulged at sight of the box. But he made no reply.

"The fact is," said the cardinal, "he could not get there earlier because his horse was upset and lamed at Auteuil, and the marquis was forced to walk to Paris. Also, he could not present the snuff-box, because he did not chance to have it. So I beg that you and he will make up your quarrel as good relatives should."

"M. des Ems," said the chevalier stiffly, "is not one of my relatives."

"No?" queried Richelieu in polite surprise. "A 'relative-to-be' is the better term, perhaps. I understand he is to marry my pretty godchild, your daughter. And, by the way," he went on, forestalling De Sieux's reply, "when I sent for you an hour ago, chevalier, I bade you bring your daughter. She is waiting in the ante-room, I suppose—is she not?"

"I did not bring her," answered the chevalier, anger beginning to replace his cold courage.

"She is from home, your eminence."

"From home?" echoed Cardinal Richelieu. "Where, then? Tell me where, and I well send at once for her. At the house of a school friend? Where?"

"I know not, your eminence," grumbled the chevalier, discomfited. "She—"

He got no further. Up to this point I had viewed the proceedings, for the most part, with an impartial air of a spectator at a playhouse. Now, all at once, I became vibrant with interest. I saw the chevalier was speaking the truth when he said he was ignorant of his daughter's whereabouts. And the words went through me like a dirk-thrust in the heart.

I had parted with Claire at her father's very door. She had vanished as Des Ems had attacked me. I had, naturally, supposed she had gone indoors.

From what I knew of human nature, I had been certain that her father, his first blaze of wrath being past, would welcome with eager repentance the return of so lovely a daughter; that he would have overwhelmed her with apologies for his brutal conduct. The thought had comforted me during my later trials.

Yet, now, the chevalier was denying, with evident sincerity, all knowledge of the girl. Had she been refused admittance to her father's house? Had she been forced to wander alone, unguarded, weeping, through the midnight Paris streets, when even armed men shrunk from venturing singly?

The thought gripped me by the throat and sickened me with the utter horror of it. I sprang once more into the radius of candlelight, beside myself with excitement.

"Your eminence," I panted, "let me go—let me go in search of her. I——"

"Silence!" thundered Richelieu. "Is this a low tavern, that every down-at-heel provincial may interrupt me by bellowing——"

"I will not be silent!" I retorted. "Clair de Sieux was turned out of her father's house. A young girl—alone—defenseless! She is roaming the streets of Paris in terror, in fearful peril! Give me a search-party, or let me go alone to——"

"I have ordered you to be silent!" snarled Richelieu. "What is this miserable girl's fate to you?"

"I love her!" I cried. "I love her, and she needs me to save her from I know not what dangers. Let me go! I——"

"You love her?" sneered Richelieu. "An unknown provincial dares to love the daughter of a French noble? Truly, the world is upside down when such a one forces his love upon—"

"I have not 'forced' my love upon her!" I denied. "I have spoken no word of love to her. Nor should I dare to. But I have the right to guard her, and I will!"

"Forsooth!" mocked his eminence, as I whirled toward the outer door. "The young American paladian would rush forth into the night with a hope of finding one woman in all these miles of meshed streets. As well seek a needle in——"

"Love will show me the way," I answered, gloriously insane. "Let me go, or I will slay you, and force my way past your guards, unarmed as I am! And——"

The cardinal strode forward, his lean frame tense and quivering.

"This is too much!" he exclaimed. "You are under charge of dueling and conspiracy. Either charge would cost your head. Yet you insult me in my own palace and threaten to murder me! There is but one fate for such as you!"

Setting a silver whistle to his lips, he blew a shrill blast. As he did so I leaped toward him. Twenty hands jerked me back. The room, as by magic, had become alive with armed men.

Writhing, straining, helpless, my splendid strength cramped and rendered useless by sheer force of numbers, I was dragged forward to the table.

There Richelieu had reseated himself, and was glaring coldly, inscrutably, up at me with the air of a judge.

"Send me to instant death if you will!" I shouted, drowning the slow, measured words he had begun to speak. "Death has no terror for me. But I implore you, by all you deem holy, to send forth searchers at once, to——"

The guard-captain's big hand, at a sign from the cardinal, was clapped over my mouth.

"Death has no terrors for you?" scoffed Richelieu. "Then, death shall not be your portion. For you I reserve a deadlier, more dire fate. You are a son of the forests. Your days and nights have been spent under the stars. The very walls of this room stifle you. You have lived free, with none to dictate to you, with naught to curb your steps. The loss of that liberty, perchance, may mean more to you than mere quick death!"

I did not answer. Yet I knew his all-reading eyes could see the sick despair that such a picture roused within me.

He studied my perturbed countenance for what seemed an eternity, and then——

"It is well," continued his eminence, his voice dropping to the solemn, slow, sonorous tone of a condemning judge. "This, then is my sentence upon you:

"You shall be led from this spot into lifelong imprisonment. No more shall you come or go at will. Evermore, your jailer shall be the master of your actions. The eagle shall not long more vainly for flight through wind-swept skies than you for the old liberty that was dearer to you than life."

CHAPTER XI.

My Jailer.

I looked him full in the eye. If my cheeked blanched, my glance did not quail before that imperious, merciless gaze. He went on:

"I do not send you to the Bastile, where the voices of other captives might lessen your solitude. I send you, instead, to a prison cell where your jailer alone awaits you. Captain Dufresne, conduct the prisoner to the Solitary Cell."

He turned away from me. Strong hands whirled me about. With four soldiers guarding me, and the captain walking ahead, I was marched from the room. As I went, I had a fleeting glimpse of the cardinal once more facing Des Ems and the chevalier.

Down the corridor we clanked, then to the left and up another. Then we halted before a door. The captain flung it open. At a signal from him I was

(Turn to Page 17.)

A Practical Reminder for Everyday Farmers

You know your farm like a book. Whether it covers 80 acres or 320 acres, you are perfectly familiar with every corner of every field. You know the lay and contents of the buildings that make up your homestead. With your eyes shut you can tally the livestock and all the items of farm equipment. To be well posted on these things is a matter of pride with you and a matter of careful management besides.

This policy could well be carried a step further. Profitable, economical farming is so largely a matter of modern, improved machines that every good farmer should keep posted also on the equipment on the market so that when occasion arises he may invest to the very best advantage by the purchase of new machines.

We are therefore printing here for your information the list of standard, reliable, most popular farm equipment—

THE McCORMICK-DEERING LINE *of* FARM OPERATING EQUIPMENT

Grain Binders
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Push Binders
Mowers
Hay Rakes
Tedders
Hay Loaders
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Sweep Rakes and Stackers
Combined Side Rake and Tedder
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Listers
Corn Cultivators
Corn Binders
Corn Pickers
Corn Shellers
Ensilage Cutters
Huskers and Shredders
Huskers and Silo Fillers
Beet Seeders
Beet Cultivators
Beet Pullers
Cotton Planters
Grain Drills
Lime Sowers
Broadcast Seeders
Tractor Plows
Walking Plows
Riding Plows
Disk Harrows
Spring-Tooth Harrows
Peg-Tooth Harrows
Tractor Harrows
One-Horse Cultivators
Culti-Packers
Kerosene Engines
Tractors
Motor Trucks
Cream Separators
Manure Spreaders
Stalk Cutters
Feed Grinders
Stone Burr Mills
Cane Mills
Potato Diggers
Wagons
Twine

This equipment is always available for you at the store of the McCormick-Deering dealer. In the list are many items for farming in winter—such as engines, various belt power machines, cream separators, motor trucks, etc. Make the McCormick-Deering dealer's store your headquarters. Use the service for which his establishment is famous. Write us direct for information on any of the above machines.

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—"Jacquette" Blouses stitched in self or contrasting colors.
—Beaded and embroidered crepe de chine blouses in all the newest colors.

Mail orders filled.

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—"Merode" union suits, as you probably know, are hand-tailored, made of the best selected yarns, full-fashioned and perfect fitting.
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—High neck, long sleeves, ankle length.
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—The "Joslin Special" nightgown is made of 36-inch outing flannel—cut extra long and extra full. The outing flannel used is also extra quality. $1.98.

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for Women.

—Beacon robes are comfortable and warm. The material is woven to keep the warmth in and the cold out. In light and dark colors. $7.95.

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—And the Men's Shop has them in Beacon cloth—conservative, neat patterns. $8.50 and $10.00.

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—Perhaps you know about "Yanky Maid" bungalow aprons—made of the very best ginghams and percales obtainable. Made in styles that delight the woman who likes to look attractive. And moderately priced, too. $1.95.

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—Every little girl adores a "Mama Doll"—when you bend it over it says "Mama" as plainly as you can say it yourself. Dressed in rompers, a hood to match and patent leather Mary Jane pumps. $1.98.

Mail orders filled.

The Joslin Dry Goods Co.

Seventeenth and Curtis. Denver, Colo.

Message of the Christmas Seal.

Christmas Seals have come to be as closely associated with that holiday season of the year as Santa Claus, mistletoe and plum pudding. Packages that are wrapped with holly and red ribbon do not seem complete now without the little Christmas stickers. And why? Because every health seal that appears on letters, cards or bundles, shows that its purchaser has given a helpful thought to somebody less fortunate. And Christmas is the season when everybody feels the spirit of doing for others.

Fifteen years ago a woman with a vision, Miss Emily P. Bissell, of Wilmington, Del., conceived the idea of raising funds to help in the anti-tuberculosis work of her state. She had read in The Outlook magazine an article by Jacob Riis on the Christmas stamp sold in Denmark for the support of a children's hospital.

At the time Miss Bissell was secretary of the Delaware Red Cross Chapter. With but $40 secured from two friends, as her capital, she obtained the official consent of her chapter and of the post office authorities to put a few thousand seals into circulation. Stores, newspapers and women's clubs all supported her with great enthusiasm from the first. Through such generous and united effort, 300,000, to her a number beyond all her dreams, were sold that first year and $1,000 was paid on the site of the first tuberculosis sanatorium in Delaware, known as Hope Farm.

From the beginning, all those interested in the movement realized that their task should be to spread a knowledge of the disease, to teach the public that it might be prevented and thereby decrease its enormous death toll. From the very start then, the campaign to fight tuberculosis has been an educational campaign.

As a result of Miss Bissell's demonstration and earnest pleading, the American Red Cross decided to take up the enterprise on a nation-wide scale the next year, 1908. The parent organization was handicapped by lack of funds and again Miss Bissell found the necessary backers who shared her faith. She personally undertook the task of writing to 4,000 newspaper editors throughout the country, asking them to publish the fact that orders for seals should be sent to national headquarters. The result was a veritable flood of orders.

This year's seal with the mother and child, is symbolic of the helpful guardianship of this double-barred cross over the children of our country. T. M. Cleland, artist of the seal, says: "To me the design means the sentiment and impressions of the protective function of the Tuberculosis Crusade. The protective love of the mother and the cross are symbols indicative of this general impression."

There are briefly summarized eight elements in the campaign to which Christmas Seal sale money has been and is applied. There are: 1, For increasing the number of hospitals and sanatoria for the treatment of tuberculosis from 100 (sixteen years ago) to nearly 700, with approximately 60,000 beds; 2, For establishing more than 500 clinics and dispensaries; 3, In securing at least 3,500 special tuberculosis nurses who instruct in the home, mothers and their families; 4, Toward research work; 5, For statistical study; 6, For publicity in distributing during the past sixteen years approximately 1,000,000 pieces of printed matter; 7, For the Modern Health Crusade which has enrolled nearly 8,000,000 school children who are learning daily health habits; 8, Toward securing over 3,000 open-air schools and preventoria.

More than $20,000,000 has been raised from the Christmas Seal to spread information regarding tuberculosis and the most effective ways to combat the disease. Yet there are at the present time more than a million active cases of tuberculosis in this country. It is estimated, moreover, that there are that number of inactive cases. And yet, tuberculosis is a preventable disease.

More than one billion Christmas Seals will be in circulation this year in December. A chance is given everybody then to help carry on the work of Miss Bissell and share in making the dream of tuberculosis workers come true. Their efforts will not cease until they have conquered completely this unnecessary disease. Buy Tuberculosis Seals in December. Let all your packages and letters show the spirit of joyous helpfulness and carry the message of hope and health that is hidden in every Christmas Seal.

Seven Acres of Christmas Gifts

Remembering the entire family becomes a pleasant diversion when your selections are made at The Denver. Here is a vast Storehouse of Christmas merchandise, occupying seven acres of floor space. Endless assortments assure just the right gift for everyone on your list.

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If in doubt, describe your wants to Mr. L. C. Guesnier or Mrs. N. R. Nichols, care of our Special Shopping Bureau, and you will receive merchandise that has been selected by shoppers of experience, judgment and good taste. If they fail to meet your requirements, you can return them.

We PREPAY ON ALL OF OUR GOODS EXCEPTING FURNITURE, MATTRESSES AND LINOLEUM.

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Find Just What You Want.

Whenever you are in need of anything for your farm, ranch or household, and do not know where to buy it, look over the Farmers' and Stockmens' Ready Reference Directory in this issue. There you will find almost everything under the sun offered for sale by reliable firms that will treat you right in both price and service.

The Department of Agriculture estimates the annual damage from insects at over $1,000,000, including damage to farm crops, forest and park trees. Ravages to trees are placed at $100,000,000. It is estimated that birds in Massachusetts during the growing season destroy 21,000 bushels of insects daily.

Getting Rid of the Boarder Cow

ANIMALS HAVING LARGE CAPACITY FOR FEED USUALLY MOST PROFITABLE.

KNOWLEDGE of what each individual cow is returning over and above the cost of her feed is essential to the building up of a profitable herd. It is sometimes rather disconcerting to the beginner in record work to find that the cow with the largest amount of feed charged against her production often is the one showing the largest profit above feed cost. Without the two sets of records, production and feed consumption, the first thought would be that the cow with the big feed bill was being fed too much. It frequently happens, however, that the cow with the low feed bill has barely paid for her feed or even produced at a loss. The two sets of records enable the dairyman to feed his profitable cows to their capacity for returning profit and to get rid of the ones that will not return a profit from the feed they consume. In the herd where no individual records are kept there may be a profit, but it is almost certain that a few cows are paying the board bill of a number of unprofitable cows. In many a herd a third or more of the cows could be sold and the remaining cows make more profit than came from the larger number.

Dairymen in the western states are recognizing the value of the cow testing associations in helping them to get individual feed and production records, points out J. E. Dorman of the western office of the Dairy Division of the United States Department of Agriculture. Ten years ago there were only two cow testing associations west of the Kansas-Nebraska line in active operation. These are still active and among the strongest associations in the country. During the past year many new ones have been added to the list and there is room for many more which may be organized in the near future. At the present time there are forty-two associations, representing about 25,000 cows, sending in monthly reports to Mr. Dorman's office in Salt Lake City, Utah, in comparison with seventeen associations, representing 8,000 cows, last year. These monthly reports are compiled and mailed to the officers of each association, the testers, county agents and to the extension offices in each state, which tends to keep the work constantly before everyone interested. In addition to the summary reports sent out, short notes giving conditions, prices of feeds, stock for sale, etc., from each section, supplement the report and have been found interesting to many.

The testers in the western associations are not just bookkeepers, but are rendering a real service to the members in many ways. For instance, last year a survey was undertaken to determine how many herds in the associations were using purebred bulls. The report was very disappointing, as there were many apparently high producing herds in which grade bulls with no possibilities in their inheritance of siring increased production or even maintaining the production of the cows in the herd were being used. A campaign throughout the west was immediately started to eliminate the scrub bulls from all association herds. The response from the testers was very encouraging, and resulted during the year in the elimination of all scrub and grade bulls in nineteen of the associations, representing approximately 7,400 cows. The testers also advised the individual dairyman as to better feeding, which has resulted in the building of several hundred silos for both summer and winter feeding. Nor do they neglect the sanitary side of dairying and a better product is being marketed, which in most cases result in a larger income. Just at present there is a movement started among the testers to have all herds in the associations on the accredited list, and some progress is being made in that direction.

All the work outlined means much in the establishment of a permanent dairy industry in the western states, and no doubt will have a tremendous influence on future herds in this section. From the work that is being done, it may be surmised that the testers are unusually high class men, and it is true. Many of them are four-year graduates of agricultural colleges, and while the average salaries are low for such men, some of them are getting rich experience and are preparing themselves for higher positions, where such experience will be a valuable asset. Salaries range from $1,200 to $1,800 per annum, with board and lodging. Many testers starting a few years ago at a low salary are now occupying positions that pay from $2,500 to $3,000 per annum.

Does it pay to have a tester that can be a real adviser to the members? The dairymen say it does. In looking over the production records of all the cow testing associations in the United States it will be found that the associations in the western states exceed all other sections in average production. Is it because we have better cows, better feed, better climate, or more efficient testers? At any rate, the tester is an important factor.

More Milk From Fall Freshening.

There are varying opinions as to the best time to have cows freshen, but after a thorough study of the records of 10,870 cows in 64 testing associations the United States Department of Agriculture has found that cows dropping their calves in the fall produce more milk and butterfat. In the sixty-four associations fall freshening ranked first twenty-nine times in average milk production; winter freshening ranked first eighteen times; summer freshening, ten times; and spring freshening seven times. In butterfat production fall freshening was first thirty-eight times, winter thirteen times, summer eight times, and spring seven times. The tabulated results and detailed explanations have just been published in Department Bulletin 1071, "Influence of Season of Freshening on Production and Incomes from Dairy Cows," by J. C. McDowell.

On an average the cows that freshened in the fall, September, October and November, produced 6,689 pounds of milk, while those that freshened in the winter, summer, and spring, produced 6,439, 5, 941, and 5,842 pounds, respectively. These fall cows produced on an average 268 pounds of butterfat. Those that calved in winter, summer, and spring made, in order, 258, 236, and 236 pounds. In spite of higher feed cost, the fall-freshened cows made more income over feed cost. The winter ones were second, spring third, and summer fourth.

On the basis of individual months, the largest income over feed cost was made by the cows freshening in December, with October second, November third, and January fourth. The cows calving in October ranked first in both milk and butterfat production.

Although the evidence shows conclusively that fall or early winter freshening is desirable in most parts of the country, there are exceptions to the rule. The dairyman who has a steady market for milk at fair prices during all seasons of the year will usually find it to his advantage to keep the supply fairly uniform from month to month. The percentage of cows that should freshen each month in the year will vary to some extent in different localities and on different farms in the same locality. At present in market milk districts there is usually a surplus of milk in the late spring and early summer, and more cows should be allowed to freshen in the fall.

The bulletin should prove a valuable guide for solving the freshening problem on any farm. It may be obtained free by addressing the Department of Agriculture, Washington, D. C.

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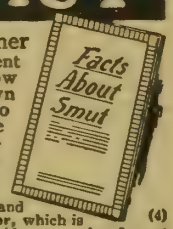

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This book gives all the information that authorities have discovered about smut and illustrates and describes the **Owen Smut Cleaner**, which is sold on an absolute guarantee to rid your grain of smut or money refunded. 4,000 machines have been sold on that Guarantee and not one returned. Just send for a copy of the Free Book, "Facts About Smut." (4)

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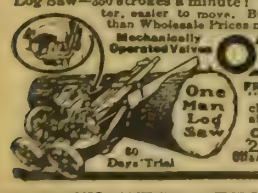

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WHEN WRITING LIVESTOCK ADVERTISERS PLEASE MENTION WESTERN FARM LIFE.

(Both Publisher and Advertiser Will Appreciate It.)

High School Boys Become Practical Farmers.

(Continued from Page 3.)

R. H. Bentley, is kept on the place to look after the stock, night and morning, and attend to the disposition of the crops and the milk. But the work of preparing seed beds, planting, cultivating, irrigating and harvesting, is done by the boys.

The crops for the past year were 11 acres of Dicklow wheat, 10 acres of Yellow Dent corn, 10 acres of alfalfa and some patches of barley, potatoes and vegetables. The wheat and corn crops are always grown for seed purposes and sold at high prices because of their uniformly good quality. The feed grain they require for the stock is purchased.

System of Teaching Practical.

The system of teaching used by the two directors seems to be especially good in its effect on the self-reliance and judgment of the boys. Shortly after I arrived there, a group came to McCormick and asked about their next work. He glanced them over and asked: "Who of you boys knows anything about pruning young fruit trees?"

Two of them said they had done a little of it and with a smile he sent them over to the potato patch to irrigate it. Then he said to the others: "I want you three fellows to go over to the orchard and decide which trees ought to be pruned—and why. Spend an hour at that and then I'll see you."

An hour after we walked over to the one-acre young orchard planted with two-year-old- trees. "Now," said McCormick, "don't all speak at once! Billy, tell me what you think about this row!"

Billy explained, describing the conditions as he saw them at each tree and the director listened as if he were listening to the state horticulturist. Then he showed where, in some respects, Billy was right, while on other points a mistake was made—demonstrating at the same time with his shears.

So with the other boys, making each in turn give his criticisms and his reasons, then putting them right. A lesson given in that way is surely never forgotten. Those boys showed as close attention and keen interest as if they were rooting at a league football game.

It should be explained at this point that at this school the students are mostly city boys—not farm boys. Some who take the course continue with a course at the state agricultural college, and almost all of the 288 boys who have graduated or are preparing to, have avowed their intention of making farming their life work.

The course is very complete in all details of practical farming. There is plenty of laboratory work: milk testing, stock judging, seed testing and selecting, drawings of land-levels with original suggestions for the proper division of farms into fields with the locations of irrigation laterals.

Through the growing season many field trips are made to outlying farms and ranches where crops are scrutinized, diseases examined and the boys required to note, on cards, their opinions on good or poor points. Stock is also judged during these trips and much information gained as to the comparative values.

Work on Farms in Summer.

During the fourth year of the course those students who live on farms or ranches or who have farmer relatives near by, are required to carry out some special project. These projects are chosen by the boys themselves early in the year and they vary from a score of hens to 3,000 sheep or a bunch of range cattle, or from a half acre of potatoes to a hundred acres of wheat or hay. It is the student's duty to keep account of the preparation of the land—if it is a crop project—and all the details of cultivating and harvesting. If a stock project, he must keep similar record of the handling, feeding, gain or loss. Through the summer the two directors are always in touch with these young men and their projects, driving out to the various farms and watching the records and calling attention to any errors of omission or commission. When the season ends the student makes out a full report showing the expense and results.

That is the practical side of the fourth year course on farm management. During the winter season these reports are examined in class by all the boys and the various points analyzed and discussed. The value of this cannot be overestimated. If a certain field of potatoes has shown a poor yield, the causes—whether of poor seed, weather or poor management, are vividly shown to the whole class. If two or three cows have shown poor profits the causes are traced by the records. If a big band of sheep on range have done remarkably well in lambs and wool, there is definite data for the information of the boys. It is not experimental work with new breeds or new methods, but the record and criticism of practical, everyday farming.

Agricultural Students Make Good.

C. F. Dienst, the high school principal, is evidently as much interested in the agricultural course as in the classical course. He says: "Quite a few of our graduates are now helping to feed the world, either as good farmers for themselves or as superintendents or advisers. Stephen Regan is a seed expert of national repute. During the war he was sent to Europe in connection with such work. Edgar Neal, of the class of 1916, has just completed his course at the University of Idaho, and is now water master of the Big Lost River project.

"There are many other graduates who are now in fine responsible positions on farms and ranches, but it has not been our purpose to train specialists. Rather, we have tried to help the boys to be good all-around farmers. We have tried to give them a vision of their opportunity for service as farmers and a sense of the dignity of their work in the world."

Results of Purebred Sire Campaign.

When purebred sires are purchased to head their flocks, it is not long before the percentage of purebred females increases noticeably. This encouraging tendency toward more rapid improvement of livestock has been brought out by the United States Department of Agriculture in the Better Sires-Better Stock campaign. Of a total of more than 300,000 female animals listed by farmers who have agreed to keep nothing but purebred sires, more than 35 per cent are of pure breeding. On these farms scrubs have practically disappeared. For the larger animals the reports show that only 2-4 per cent of the females are scrubs and, of course, the males are of pure blood as that is the basis on which the farms are listed.

The poultry flocks owned by these farmers are particularly well bred, only 1-3 per cent of the hens being listed as scrubs. More than 68 per cent of a total of 610,000 fowls are entered on the list as standard bred. Among the herds of hogs there are very few scrub sows—only 1.1 per cent. Nearly two-thirds of them are purebred.

This Federal-State effort to improve the livestock and poultry of the country has now brought in a membership campaign that represents nearly a million head of animals and poultry. Farmers who have become members have sent in interesting accounts of their experiences in improving their animals and their bank accounts. Other farmers who are taking part in the work are invited by the department to send in their individual experiences as well as those of community organizations engaged in the improvement of livestock. Definite facts and figures should be included whenever possible.

Getting Better All the Time.

Editor, Western Farm Life, Denver, Colo.—Dear Sir: Enclosed find subscription remittance. The paper is fine, in fact, the only paper, or rather farm magazine worth taking, for farmers in this part of the country, and the best part is that it is getting better all the time. Yours truly, J. R. Cogin, Model, Colo.

But, Oh, for the Halves!

Abe's son was on the football team at college. Coming home with a teammate to spend the week-end, he burst into his father's office, crying:

"Dad, I'm home for two days and I brought our quarter-back with me."

Old Abe beamed.

"Dot's fine, my boy," he congratulated. "I'm glad to see you mix beesness mit pleasure."

Coming—A New Serial Story:

"Tangled Trails"

A BOOK LENGTH WESTERN MYSTERY STORY

BY WILLIAM MacLEOD RAINE

MR. Raine is a Denver man who knows his Colorado and the West and has written "Tangled Trails" following his stirring "Big-Town Round-Up" and his absorbing novel of the oil country, "Gunsight Pass." Mr. Raine shows his versatility by producing a story that combines the sweep and vigor of the best western novels with the cumulative thrill of a first-class mystery story.

At the opening of the story, Kirby Lane, a ranger from Twin Butte, Mont., after winning at the Cheyenne Frontier Days, goes to call on his rich uncle in Denver on an errand of mercy, finds him brutally murdered in his room. How Kirby Lane, himself suspected, runs down this clew and that, with a breezy Western efficiency, what part Wild Rose plays in the story, the shifting of the spotlight of suspicion from one character to another, make a story which will keep you up till long after the clock strikes midnight.

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The new and enlarged edition of "Simple Instructions for Butchering on the Farm" shows you how to select stock; correct way to slaughter; how to dress and skin; how to chill; how to cure meat, etc. Pages and pages of working drawings and diagrams.

Many actual photographs contributed by butchering authorities and experienced home butchers. "Recipes for Curing Meat" shows quickest and best ways to insure delicious home cured meats at lowest cost with less effort. Reading these books and having them at hand for ready reference will enable any man to do home butchering and meat curing with surprising ease. No need to guess. The simple facts are in these books, all clear and easy to apply. Address the Home Welfare Dept., Desk 706, The Carey Salt Co., Hutchinson, Kas., and these books containing more than 60 pages will be sent free and postpaid.

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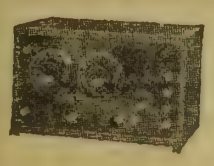

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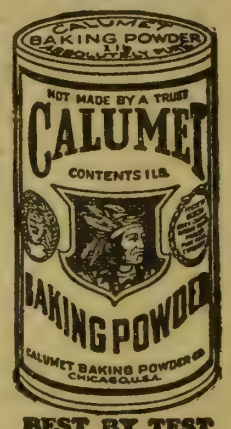

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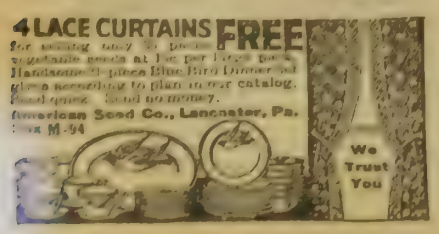

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The Rural Household

Questions about home problems promptly answered by letter and through the magazine. Letters from women containing helpful suggestions for improvement of rural life are always welcome. Address all communications to Mary G. Collopy, Editor Home Department, Western Farm Life, Denver, Colo.

The Frost Spirit.

He comes—he comes—the Frost Spirit comes
Let us meet him as we may,
And turn with the light of the parlor-fire
His evil power away;
And gather closer the circle round,
When the firelight dances high,
And laugh at the shriek of the baffled Fiend
As his sounding wing goes by!
—John G. Whittier.

Removing Gum Stains.

I am a constant reader of the Rural Household Department of Western Farm Life and get many helpful suggestions therefrom. I have a good damask tablecloth that has a chewing gum spot on it. I should like to know how to remove it. —Mrs. D. H. D., Pueblo county, Colo.

Alcohol is the most successful remedy for gum stains. Because of difference in composition of gum, further treatment with gasoline is sometimes necessary.

Drop a card to Extension Service, Colorado Agricultural College, Fort Collins, Colo., asking for the free bulletin on 'Removal of Stains."—M. G. C.

My Neighbor's Story.

Mrs. Hartson was facing another Christmas season. It had been a poor crop year and the egg and cream money was needed to purchase clothes for the children. There were friends whom she wished to cheer and yet—Yes, she could write Christmas letters. After all, what better gift can come from a sincere friend, she thought.

Just then, her neighbor telephoned: "Come on over and help me pack Christmas gifts which didn't cost a cent," she urged. When Mrs. Hartson arrived she beheld huge pfles of kinnikinnik, gay with red berries, pine cones, evergreens of all descriptions in wreaths and otherwise. In some of the boxes had been placed a red ribbon bow on top of the greens. But the spirit of cheer and the joy of sharing the mountains was expressed in the written card included in each package. One larger box, which went to a lonesome Colorado girl in a coast state, contained a tiny Christmas tree, already mounted on its small standard.

Mrs. Hartson realized for the first time what treasures lay at her own door. She decided to help her husband gather pine knots and pitch logs for fireplaces of friends in town.

Do You Want Recipes?

Do you want some recipe? If so, feel free to ask. We shall find it for you in our own experience or in the experience of some other reader. Have you a recipe which would help others? If so, we shall be very glad to have it.

The following apple dumpling recipe has been sent in by Mrs. Dana H. Davis, a constant reader, who is interested in saving the Colorado apple crop:

Make a good pastry, roll out in circles of eight inches or more in diameter. Have some apples chopped, put a handful on dough, sprinkle with sugar, cinnamon or nutmeg, add about a tablespoonful of hot water, and, if you wish, a few raisins. Fold edges of dough over the mixture, moisten edge to hold it together. Place in a baking pan, sprinkle sugar and cinnamon on top, pour a little water around them, and bake in a medium oven. Serve with whipped cream or any good sauce.

The Farmers' Congress.

Where will you be December 11, 1922? You will be at Colorado Agricultural College, attending the Homemakers' Section of the Farmers' Congress. Why not represent your community?

Those of us who have been in close touch with this annual meeting cannot recall a single year when the Women's Program was any more worth while than it promises to be this year. One morning will be given over to Mrs. Hyde, clothing specialist, who will give just the dressmaking help which you want. Following that, will be work in Home Furnishing—everything from cleaning wall paper to floor coverings.

Rural Life Conference day offers an opportunity to hear two women from Colorado rural districts who will tell of work that has been done and can be done in the rural club and the rural church.

The Shepherd-Towner bill, which is of vital interest to every woman and girl, will be fully explained. Much work will be given in diets for babies and growing children. A Red Cross nurse will give actual demonstration in weighing and measuring of undernourished children.

Think several times before you say "John and I can't go to the Farmers' Week this year." Ask some neighbor to do the chores for that week. Make it a vacation for John and you—or a second honeymoon. Do not miss this splendid educational opportunity.

Children's Book Week.

We recently celebrated "Children's Book Week," and throughout the country libraries prepared special exhibits; stores filled their windows with books helpful to children and the press emphasized the importance of good reading. We all know that many a man has attributed his first start and all his success in after life to the books read in his youth. They opened up to him his possibilities, indicated his tastes, and helped him to find his place in life.

Just now parents are thinking of Christmas gifts for their children. Why not select from the twenty-five "best books" for country school children? This list has been prepared by the American Library Association and the National Educational Association. The five leading the list are:

"Little Women"—Louise M. Alcott.
"Alice in Wonderland"—Lewis Carroll.
'Robinson Crusoe"—Defoe.
'Tom Sawyer"—Mark Twain.
"Treasure Island"—Robert Louis Stevenson.

While these five head the list, the following are worthy of consideration: "Boys' Life of Abraham Lincoln," Nicolay; "Jungle Book," Kipling; "Fairy Tales," Anderson; "Boys' King Arthur," Maloney; "Rebecca of Sunnybrook Farm," Wiggins; "Christmas Carol," Dickens; "Rip Van Winkle," Irving; "Wonder Book," Hawthorne; "Wild Animals I Have Known," Seton; 'Boys' Life of Theodore Roosevelt," Hagedorn.

Miss Sheridan Heads Women's Work.

Miss Maude E. Sheridan has recently been appointed assistant director in the Extension Service, Colorado Agricultural College, to be in charge of the planning and organization of women's work. Her relationship to club work remains unchanged. Miss Miriam Haynes' resignation as State Leader of Home Demonstration Agents has been accepted. Colorado women who have been helped by Miss Haynes will rejoice when they know that Miss Haynes has decided to go into the biggest business the world has yet found for women.

Our Fashion Service.

All patterns 12 cents each. Address Western Farm Life, Pattern Department, 1518 Court Place, Denver, Colo.

Read This Before Ordering: Patterns ordered through this magazine are mailed promptly from the factory at Brooklyn, N. Y., and arrive in 10 to 12 days from time order reaches Western Farm Life. Be sure to specify size and number of patterns. Write your name and postoffice address plainly to avoid delay. These patterns are handled at cost, as a service to our women readers. The price of 12 cents includes postage.

4178—A Good Style for the Woman of Mature Figure. Broadcloth or serge with braiding, or with flat braid will be attractive for this model. The waist is a good feature. The lines are graceful. Comfortable plait fulness adds to the width of the skirt. This pattern is cut in seven sizes: 36, 38, 40, 42, 44, 46 and 48 inches bust measure. A 38-inch size requires 3⅝ yards of 54-inch material. The width of the dress at the foot is 2¾ yards.

4172-4174—A Stylish Street Costume. Plaid woolen for the skirt, and velvet for the coat, will carry out the idea here portrayed. One could have coat and skirt of velvet, or of twill cloth, for service. The Coat Pattern 4172, is cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. The Skirt Pattern 4174, is cut in seven sizes: 25, 27, 29, 31, 33, 35 and 37 inches waist measure. The width at the foot is 2¾ yards. To make this style for a 31-inch waist size will require 3⅝ yards of 44-inch material.

4180—A Pretty Frock for "Service" or "Porch." Chintz and unbleached muslin were combined to make the style here illustrated. The model is also good for cotton crepe, sateen, and percale. The girdle may be omitted, and the fulness held in place with a girdle or belt. This pattern is cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires 4⅝ yards of 32-inch material. To make the waist of contrast-

ing material will require 1¾ yard. The width of the skirt at the foot is 2¼ yards.

3770—A Dainty Set for the Boudoir. Pattern 3770 supplies these three models. It is cut in three sizes. Small, medium and large. The Cap No. 1, will require ¾ yard of 27-inch material. No. 2 will require ⅝ yard. One pair of Slippers will require ⅝ yard for a medium size. For the caps: Lace, batiste, net, lawn, satin, silk, cretonne and chintz could be used. The slippers are attractive in silk, satin, cretonne, chintz, flannel and eiderdown.

4183—A Comfortable Under-Garment. This style will readily appeal to the woman who desires freedom and comfort as applied to bloomers. Sateen, crepe, serge, flannel and silk are good materials for this model. The pattern is cut in four sizes: Small, 27-29; medium, 31-33; large, 35-37; extra large, 39-41 inches waist measure. A medium size requires 1⅞ yards of 36-inch material.

3438—Two Dainty Aprons. Pattern 3438 supplies these styles. It is cut in one size: Medium. No. 1 will require ⅞ yard of 36-inch material, and No. 2 will require 1¼ yard. Lawn, dotted Swiss, dimity, crepe and embroidered materials are attractive for these styles.

3814—A Popular Style. Every school girl's wardrobe should boast of a frock of this type. With a warm coat or cape it makes an ideal winter costume. Soft woolen materials, plaid or checked suiting, serge, poplin, repp, gingham, linen, pongee and taffeta are attractive for this model. The sleeve may be joined to the dress or guimpe. The pattern is cut in four sizes: 6, 8, 10 and 12 years. A 10-year size will require 2¼ yards of 27-inch material for the guimpe and 3¼ yards for the dress.

4188—A Simple Frock for a Small Miss. Plaid gingham in brown tones is here shown. The dress is also attractive in gabardine, tricotine, percale and other seasonable materials. The sleeve may be finished in wrist or elbow length. The pattern is cut in four sizes: 4, 6, 8 and 10 years. A 6-year size will require 3 yards of 32-inch material. Collar and cuffs of contrasting material require ⅝ yard.

CATALOGUE NOTICE.

Send 12 cents in silver or stamps for our UP-TO-DATE FALL AND WINTER 1922-1923 BOOK OF FASHIONS, showing color plates, and containing 500 designs of Ladies', Misses' and Children's Patterns, a concise and comprehensive article on dressmaking, also some points for the needle (illustrating 30 of the various simple stitches), all valuable hints to the home dressmaker.

Let Me Remember.

Let me remember, O Lord, the true meaning of Christmas. Purge my soul of every trace of selfishness.

Let me remember the poor and the sick in hospitals or in homes.

Let me remember how little it takes to brighten the life of the invalid who must stay in.

Let me remember my duty to my community at this joyous season—there must be at least one neighborhood festivity for all.

Let me remember my duty to my family. I must not foolishly worry or overwork in order to make needless displays of food or gifts.

Let me remember the overtired saleslgirl so that I may do my shopping early.

Let me remember the good old custom of placing a lighted candle or a lamp in my window during this season that the passer-by may catch the cheer.

Let me remember, my Heavenly Father, that the humble birth of thy Son was for us a symbal. Keep me humble and broadminded, that all prejudice 'gainst race or creed may be banished from my thoughts forever.—Mary G. Collopy.

National Cancer Week.

During November all of you read newspaper articles on "Prevention of Cancer." A noted surgeon recently told the writer that nine out of every ten cases of breast cancer were caused by the wearing of high bust corsets.

What can we do? We can refuse to buy such corsets. We can wear brassieres with low bust corsets.

This is by no means a trivial consideration to anyone familiar with the rapidly increasing number of cancer cases.

Cleaning Baby's Hair Brush.

If there are any hairs in the brush, remove them first. Dissolve a dessertspoonful of borax in a quart of very hot water. Dip the brush, bristles downward, into this, keeping the back and handle free from the water. Keep dipping the brush until it looks clean, then rinse in pure cold water, shake well, and wipe the back and handle with a towel. Set the brush in the sun, or near the fire, to dry. On no account use soda or soap to cleanse an infant's brush. In any case soap softens the bristles.

A Silk Stocking Hint.

The acid which is contained in perspiration is most injurious to silk, and this is the reason so many people find their silk stockings wear unsatisfactorily.

To counteract the action of this acid the feet of silk stockings should be sprinkled with a little powdered carbonate of soda, and as soon as possible after strenuous exercise the stockings should be removed and rinsed in cold water.

Timely Suggestions.

Anger is worse than poison.

We are all judged by our worst work.

Hell is not as pleasant as the road to it.

Think of others as if you were the others.

Wisdom consists of knowing when you don't know.

We always hate those to whom we have been unjust.

Some men look for work and are afraid they'll find it.

It is always good to know, if only in passing, a charming human being; it refreshes our lives like flowers and woods and clear brooks.—George Eliot.

White lace or curtains may be dyed cream or ecru by shaking in a box with a small amount of yellow ochre. The amount depends upon the shade desired.

Be bigger than your troubles.

You get nothing for nothing.

The First American.

(Continued from Page 11.)

thrust in, and the door was closed and barred behind me.

I found myself in an apartment that seemed more like an oratory than cell. Its floors and walls were of stone. A praying-desk and a missal stood at one side. A bench on whose corner flickered a small candelabrum was in the center, and but for the crucifix on the wall and a curtain at the alcoved window, the place was unfurnished.

Then I recalled that Richelieu was a churchman, and that some of his prisoners were perhaps recalcitrant monks. This explained the nature of the cell.

And here, apparently, I was doomed to end my days! Yet I had escaped before from seemingly tight traps. Possibly the door's lock was weak. More likely the window-bars might be twisted out by a man strong and clever enough.

I knew I was but two floors above the street. If I could force the window, and tear the curtain into a rope, I might get clear.

I moved toward the curtained window alcove. As I neared it I heard a muffled sound behind the curtain.

My jailer! I had forgotten him. But a sudden spring, a quick attack, might overpower him before he should have time to cry out for aid.

As I saw the curtains move I gathered myself for the assault. Then—

The curtains parted, and toward me, from between them came Claire de Sieux!

My tense muscles relaxed, my jaw dropped, my eyes seized upon her wonderful face with an unbelieving, adoring stare. My mind was in an absolute whirlwind. I could not speak, move, nor think. I had reached the point of excitement where all things seemed natural. Had the walls of my cell faded away, leaving me in an Iroquois canoe, I should have felt no further surprise.

Through the mists of crass bewilderment I saw only her amber eyes, heard only her silver voice. For she was speaking.

"His eminence promised to send you to me," she faltered timidly. "He bade me wait for you behind the curtains."

Still I could not speak nor move. From my mute, wondering face she must have seen how dazed I was, and how incapable of understanding the situation. For she went on, as though teaching a lesson to a stupid child:

"When you fought with the Marquis des Ems I hid in the shrubbery. From the moment he shouted for the city watch I knew the trick he meant to play. It is not a new ruse. I could not be of aid to you. So I waited. When you had been led away I hurried to the cardinal——"

"To the cardinal?" I muttered thickly, trying to make the matter clear to my own befuddled mind.

"I told him everything," she continued. "Everything! He sent for M. des Ems—I knew who he was, for the watch captain had called him by name—and he sent to the Bastile for you. Then he told me to wait here in his oratory——"

"His oratory!" I cried out. "You have been conducted to the wrong place. This is a cell where I am condemned to—— Oh!" I broke off, "I thank heaven you are safe! I feared so, lest you——"

"I am safe," she reassured me, still speaking soothingly, as to a child. "And, through my entreaties, my father is safe, too. "Yet," she added sadly, "his eminence is to banish him to his country estates in Normandy and to forbid him to return to Paris. I shall not see him again. I would he had been fonder of me!"

"Not see him again! But——"

"He has cast me off. I am alone."

"I wish that I might be at your side, to guard you, to lighten your loneliness, to be of use to you if only as the meanest of your servants," I groaned. "But I am a life-prisoner. Even now I await my jailer, and——"

"His eminence told me," she interposed shyly. "And, sir, I—I am afraid I am the jailer he has chosen for you. Will the imprisonment be so terrible?"

I know not what I answered. I found myself on my knees before her, there on the cold stone floor, kissing the white little hands that were somehow not withdrawn from my longing grasp, and whispering the wildest, most amazingly ridiculous love words to ears that for some reason seemed willing to hear them.

My next clear memory is of standing beside Claire in the window alcove, my arm holding her close to me, her dear head on my breast. We were looking out over the sleeping city toward the dawn-tinged east.

A sound caused us to turn. Behind us stood Armand Jean du Plessis, Cardinal de Richelieu, prime minister of France. At his heels were a line of acolytes and priests. Motioning us toward the prayer-desk, he said gravely:

"The ceremony binding the life imprisonment is about to begin. After it a place in my own household awaits the gallant man who yesterday saved Richelieu for France. Or, if the captive prefers, the wide continent of America may serve as his future prison."

We were on our knees before him, Claire and I.

"So long as I may keep my jailer forever," I murmured, "any prison will be paradise. But I choose to take my bride to my own home, your eminence.

"Remember, I am an American—the first American!"

(The End.)

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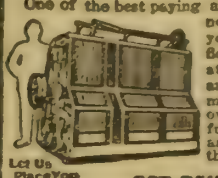

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Saves the high freights on wheat out and flour and feed in. "The first eight months I made a net profit of over $6000," says A. H. Ling, Jetmore, Kan.; "My profits, from the "Midget" Marvel average right around $40 per day." Chas. M. McKinney Cooper, Tex.; "Was $6000 in debt when I bought my 25 barrel "Midget," and the little mill pulled me clean out of the hole long before I bought my 40 barrel mill from you." says M. A. Kamm, Oxford, Mich.

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"Dandelion Butter Color" Gives That Golden June Shade and Costs Really Nothing. Read!

Before churning add one-half teaspoonful to each gallon of cream and out of your churn comes butter of Golden June shade to bring you top prices. "Dandelion Butter Color" costs nothing because each ounce used adds ounce of weight to butter. Large bottles cost only 35c at drug or grocery stores. Purely vegetable, harmless, meets all State and National food laws. Used for 50 years by all large creameries. Doesn't color buttermilk. Tasteless. Wells & Richardson Co., Burlington, Vt

Do You Want a Herd Bull?

Read the ads in the Livestock Department of this issue. If you do not find what you want write Breeders' Dept., Western Farm Life, Denver

New Mexico Club Teams Win Trips to Stock Show.

Free trips to the National Western Livestock Show at Denver, the major prizes in the annual boys' and girls' club livestock and demonstration contest, held at the New Mexico College of Agriculture and Mechanic Arts, October 27 and 28, were won by the San Miguel county livestock judging and the Bernalillo county demonstration teams. Curry county, however, carried off high honors with nineteen first, fourteen second and six third prizes.

This contest, with twenty-two teams representing fourteen counties entered, was probably the largest meeting of its kind ever held in the state, and the work, especially in livestock judging, showed great improvement over previous years. Friday and Saturday were given over entirely to judging and demonstration work, with announcement of the winners and the awarding of prizes on Saturday night.

Hubert Harber of Baca county was declared the best all-around judge of livestock, with an individual score of 609, and is a member if the grand champion team. The other members of the champion team are Oscar Cash and Ira Paulsen.

The work of the teams was varied by numerous entertainment features arranged by the college. These included automobile trips through the Mesilla valley, radio demonstrations, movie shows and a picnic by the dam, during which each delegation presented an individual stunt. The contestants roomed and boarded in the college buildings and lived the life of regular college students during their stay.

Prevention of Grain Rust Conference.

Seventy-five delegates from thirteen north central states were in attendance at the second annual meeting of the Conference for the Prevention of Grain Rust, held November 14 at St. Paul, Minn.

They unanimously adopted a resolution urging Congress to appropriate $500,000 for the continuation of the war on the common barberry bush and recommending that the various spring wheat states participate in the campaign in proportion to the seriousness of their individual rust problems.

Colorado was represented by L. M. Taylor, secretary of the state board of agriculture, and Dr. A. K. Peitersen, botanist at the Colorado Agricultural College and Experiment Station, Fort Collins. Wyoming was represented by Dr. A. F. Vass, professor of agronomy at the University of Wyoming, Laramie.

The principal speakers were John R. Howard, president of the American Farm Bureau Federation, and Dr. E. C. Stakman of the United States Department of Agriculture. President Howard described barberry eradication as a major project on the national program of the farm bureaus. Dr. Stakman, just back from an extended trip abroad, told how Europe has succeeded in controlling black stem rust by getting rid of the barberry bushes.

"Wherever eradication has been thorough, destructive attacks of stem rust have disappeared," he said. "The remarkable success of Western Europe in curbing this plague of the grain fields should encourage the United States to redouble its efforts to repeat the experience of Denmark, England, France, Germany and other foreign countries."

Reports of the progress and results of barberry eradication in this country were given by Dr. Carleton R. Ball and Dr. F. E. Kempton of the United States Department of Agriculture. A statement of the educational activities of the Conference for the Prevention of Grain Rust was made by Harrison Fuller, director of the organization. Noel F. Thompson, a Federal specialist, described experiments to destroy bushes with chemicals and said the government hoped to be able to recommend a couple of cheap and effective chemical methods of eradication for use next season.

Officers of the conference were re-elected. They are Governor J. A. O. Preus of Minnesota, president; F. M. Crosby of Minneapolis, vice president, and Harrison Fuller, secretary-treasurer.

Factors Controlling Successful Co-Operation.

Many co-operative efforts come to grief with resulting discouragement in making further efforts. That seven relatively important factors control the success of former co-operative enterprises was pointed out by Lloyd S. Tenney, assistant chief of the Bureau of Agricultural Economics of the United States Department of Agriculture, in addressing the American Farm Economics Association recently. Mr. Tenney has charge of investigations in co-operative marketing, legal problems concerning co-operative organizations, methods and practices in operation, methods of co-operation in foreign countries and the making of a historical study of co-operation. His experience and the studies he has made have led him to enumerate the seven factors which he has found fundamental in making for success in co-operative marketing efforts. They are:

1. The association must have a definite object in view. Interviews with farmers disclose that farmers frequently do not know the purpose for which the organization is being formed.

2. The organization must be formed on a commodity basis. Both at home and abroad the outstanding successes in co-operative marketing have almost invariably confined their operations to a single agricultural product or to a group of products very closely allied.

3. There must be a sufficient volume of business to cover operating costs, and the business should be controlled or under contract by the association. Many efforts in co-operation have failed because the farmers were willing enough to promise to sell their products through the association, but when the time to deliver these products came there appeared to be equally good reasons why the promises should not be fulfilled. It is not good business for a commercial organization to attempt to proceed without contracts.

4. Good management. No business can succeed without good management. The management is not only concerned with selling the products profitably, but must also recognize the individual member in the association and must function in such a manner as to satisfy this human element.

5. Proper accounting.

6. Educated membership. The members must have complete knowledge of the aims and conduct of the organization.

7. Self-perpetuating. The organization must be established and operated on lines that include and make use of the best thought and experience available; once organized it should be unnecessary to call on outside aid to re-establish policies, to provide a board of directors or management to conduct affairs.

'Practically all, if not all, of the failures in co-operative marketing violate one or more of these factors," Mr. Tenny said.

Attention was also called to the emphasis that is now being given the form of co-operation. "The form of organization may be immaterial and should be subordinate to the basic factors that have been found to make for success," Mr. Tenny said. "No organization, either local or national, that is imperialistic in that it does not develop an educated membership can achieve success."

Producers' Commission Association Doing Big Business.

In one week recently the National Livestock Producers' Association handled 457 cars of livestock. In the week's business the Indianapolis Producers' Association stood in first place with 156 cars. The Producers' Association at Union Stock Yards handled 126 cars, ranking eleventh among all the firms doing business in Chicago. The Producers' Livestock Commission Association at the National Stock Yards in St. Louis handled 155 cars and stood second of the co-operative firms.

The value of a well-trained rat dog is not sufficiently appreciated.

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Bring greater happiness into the lives of everybody on the farm by making a Delco-Light Electric Light and Power Plant your family Christmas present.

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And the new big price reduction and the time payment plan make it easy for you to get Delco-Light *now*—to place your order *today* to insure delivery in time for Christmas.

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Pleasures and Profits of Trapping.

In trapping, as in no other kind of outdoor sport, one is compelled to employ all his woodcraft instinct if he is to succeed, especially if he would capture such wary prey as the fox, mink, or that even more cunning animal, the coyote. To successfully outwit these animals is truly one of the most absorbing sports of all outdoors.

To the farm boy with ambition and a little spare time there is nothing which offers so great an opportunity of picking up pocket money as does trapping. The capturing of fur-bearing animals, though really somewhat of an art, is not difficult for even the most inexperienced if he goes into the game with enthusiasm. Like trout fishing, the one who is the most enthusiastic over the sport of trapping, is certain to exhibit the largest check at the end of the season.

A number of boys of my acquaintance of only 13 or 14 years have realized $300 to $400 from a winter's catch of furs, at the same time attending school and helping with the work about the farm. During my youth—I was raised on a farm—I was very fond of trapping and it was the money obtained from the sale of the pelts that enabled me to obtain an education above the usual Alma Mater of the farm boy—the corner lot schoolhouse.

Like all other undertakings, there are certain principles of successful trapping which can be learned only through experience and study of conditions in your particular locality. There are many things, however, which the beginner can learn from descriptive reading matter on trapping and it is to such points that this article is being directed.

One of the greatest aids to the trapper is a complete knowledge of both the habits and habitat of the animals he is going after. Every successful trapper realizes this and spends a great deal of time in the study of tracks, signs and the like. This is one reason why the Indian usually makes a larger catch than another trapper in the same locality. He is constantly observing the actions of the different animals and is therefore able to define their very thoughts, it seems. And so if you hope to realize the full possibilities of pleasure and profit from your trapping efforts you must learn to study every aspect of wild life.

Personally, I have never had much faith in the practice of boiling one's traps in some compound, or the wearing of gloves when handling them. The earth in which the traps have been buried is by far the best neutralizer of human scent of all. The wearing of gloves will not keep the odor from what you handle in making the sets. Even a perfectly new pair of gloves will be saturated with human scent in less than an hour after they have been put on, and so it is easy to see the fallacy of such methods for removing human scent.

In trapping muskrats and other water animals the traps can best be concealed by allowing the trap to be covered with about a half inch of water with few damp leaves placed directly over the set. The bait can then be hung above the trap or in a V-shaped enclosure back of the trap. A very successful way to catch muskrats is placing a trap at the foot of their slides without bait.

The fox and the coyote are probably the most difficult of all animals to outwit. They seem to be endowed with a sense of sight and smell which is almost uncanny, and it is only by using the utmost of care in making your sets for them that you can be assured of catching them. For the fox only fresh baits such as a bird, rabbit or other small animal is of value. On the other hand, the coyote is always hungry and will eat almost anything from the contents of the garbage can up. A dead horse or cow is an excellent bait for coyotes, but in making sets around such a bait the traps should be set about seven or eight feet away, as this will prevent the taking of magpies and other birds. Often a trap or two set near a pile of old bones will prove quite satisfactory, while of fresh bait a porcupine or rabbit is the most enticing.

It is in actual placing of the traps, however, that the art of trapping is best displayed. How well this part of the work is done will determine the measure of your success. A narrow trench should be made which will allow the trap, when set, to be about a half inch below the surface of the ground. The set should then be covered with dry leaves and twigs. The important part of the work is to leave everything looking natural. Never leave a ridge where the trap has been concealed, and don't use too much care in arranging your bait. The animal's suspicions will not be nearly so easily aroused if the rabbit, porcupine or other bait appears to have been deposited by accident. This is true in setting for any kind of animals. The more natural the set appears the greater are your chances of making a catch, providing, of course, a reasonable amount of care has been exercised in leaving the surroundings undisturbed.

The same care should be used in making sets for skunk, coon, ermine or any of the other fur-bearing animals, varying the methods and baits only as conditions in your particular locality indicate, as revealed by your actual trapping operations.

Never begin to set out your traps until the furs are prime. In most sections of the country the animals do not have their winter coats before November 1. Putting out your traps earlier may net you a few more skins, but the poorer quality of the pelts will more than overbalance that, while at the same time causing a decrease in the future fur supply. The best furs are obtained between December 1 and the middle of February.

There is another point which I would like to clearly impress upon the minds of all young trappers. Do not fail to look after your traps regularly. While I do not agree with those who look upon trapping as a cruel occupation, I do think it heartless for one to set out a line of traps and then fail to "run" the line at least every other day. Happily, there are but few trappers who fail to look after their lines regularly, but if you have been in the habit of neglecting yours, I hope you will not continue doing so, or else retire from the game entirely.

The present season promises to be one of the biggest years, for the trapper, in the history of the fur industry. The present outlook is that prices on all kinds of furs will be higher than at any time since the abnormal period during the war, and with fur-bearers more plentiful this season there is an excellent opportunity for the farm boy, and man, too, who has a little spare time to pick up some extra coin by running a line of traps during the coming winter months.—Emil C. Wahlstrum.

Find Just What You Want.

Whenever you are in need of anything for your farm, ranch or household, and do not know where to buy it, look over the Farmers' and Stockmens' Ready Reference Directory in this issue. There you will find almost everything under the sun offered for sale by reliable firms that will treat you right in both price and service.

Finish every day and be done with it. You have done what you could. Some blunders and absurdities crept in. Forget them as soon as you can. Tomorrow is a new day. You shall begin it well and serenely and with too high a spirit to be encumbered with your old nonsense.—Emerson.

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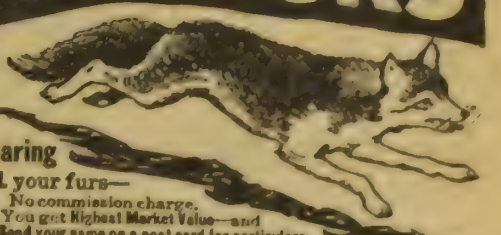

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P. S.—I wish to say that your paper is the best business getter I have ever used. My little classified ad sure got the business. Thanks to Western Farm Life. A. H. J.

Good News When the representative of the State Poultry Association calls on you with his letter of introduction get the information you can from him regarding Feeding, Care and Feeding of your Poultry, as given Free of Charge. State Poultry Association, P. O. Box 1764, Denver, Colo.

Profitable Farm Poultry

PAUL C. JAMIESON.

Inquiries on all phases of poultry production promptly answered by mail. Letters telling of your experiences and successes always welcome. Address all communications to Poultry Department, Western Farm Life, Denver.

Lack of exercise means sluggish hens and few eggs. Keep the floor well covered with good clean litter and make the hens exercise by scattering their scratch grain thinly in this litter.

A hen's crop only holds enough food to last her about ten hours, hence as the nights increase in length it is especially important that they go to roost with a full crop and have feed and water just as soon as they can see to eat in the morning.

Clean water, lots of it and not ice will mean that the hen at least has 65 per cent of the material found in the egg. Build a stand for the water container that will keep it where the hens cannot scratch it full of dirt and straw. Provide a means to keep it from freezing or attend to it often and regularly.

Feeding for Eggs.

How can we feed our March hatched Rhode Island Red pullets to make them lay. They should be laying by this time. These pullets are well developed and rather fat. They have free range and corn and wheat to eat.—Mrs. G. R. H., Sedgwick County, Colo.

March hatched pullets should be laying by the present time. A suitable ration for egg production will probably start them to laying very soon. Probably they are a little too fat. Try feeding the following grain mixture: Wheat, 35 pounds; cracked corn, 35 pounds; oats, 35 pounds.

Give the pullets all they will clean up at night and about half as much in the morning. The grain should be fed in a deep litter of straw so they will have to work for it. As a mash ration use the following mixture: Corn meal, 25 pounds; wheat bran, 25 pounds; shorts, 25 pounds; meat scrap, 25 pounds; salt, ½ pound.

Keep a supply of this dry mash before them in an open hopper all the time. You might also give them an occasional wet mash at noon. Give them all of the table scraps and supply plenty of green feed and alfalfa. Be sure they have plenty of grit and oyster shells where they can get at it any time. Milk if fed liberally will practically replace the meat scrap in the mash mixture. These rations are being recommended by the poultry specialists of the Colorado Agricultural College, particularly for eastern Colorado conditions.

For feeding in cold weather the scratch mixture as suggested above may be varied by increasing the cracked corn by 15 pounds, reducing the wheat 10 pounds and the oats 15. Vary the mash mixture by decreasing the bran 5 pounds and increasing the corn meal 5 pounds.

For conditions in the San Luis Valley, the scratch mixture might be made up of 75 pounds of wheat and 25 pounds of oats. For the dry mash mixture, use 40 pounds of pea meal, 25 pounds of ground oats, 25 pounds of bran, 10 pounds of meat scrap and ½ pound of salt. A hundred hens will usually clean up from eight to ten pounds of the grain mixture for the afternoon or evening feed.—P. C. J.

Whey as Chicken Feed.

Is whey, the by-product from the making of cheese, worth anything as a feed for chickens? Does static electricity have any influence on the hatching of eggs?—J. M. N., La Plata county, Colo.

Whey is good for poultry, although it does not have a great amount of food value. It seems to act as a conditioner.

There is a common idea that static electricity interferes with hatching, but authorities disagree on the subject. Most poultrymen seem to have proved to their own satisfaction that it does not affect hatching. Those who believe that it does do not seem to be able to give satisfactory reasons.—P. C. J.

Mash Feed for Hens.

What would be a good mash feed for Buff Cochin and Seabright bantams? Some of my chickens sit around and gasp for breath. Their eyes swell up and they go blind.—I. J. L., Weld county, Colo.

The following mixture makes an excellent mash for hens of any kind: 40 pounds corn meal, 20 pounds middlings or shorts, 20 pounds meat scrap or tankage, 10 pounds bran. If you can get ground oats it would be a good plan to add twenty pounds to the mixture.

Your chickens probably are affected with roup. You should separate all those that have symptoms of the disease from those that appear to be healthy. Sometimes it is best to kill and destroy sick ones. If you have only a few cases you may find it practical to treat them by squeezing all the pus from their eyes and dipping their heads several times in a solution of boric acid. Paint their faces and swab out their throats with iodine. It is also well to put potassium permanganate in the drinking water, just enough to make it a rich wine color. The trouble was probably started by drafts or improper ventilation in your poultry house. If the house is poorly ventilated it would be a good plan to work out some method of letting fresh air in without creating drafts.—P. C. J.

Colorado Poultry Shows.

The following is a list of the poultry shows to be held this fall and winter in Colorado, with the dates, and names of the secretaries:

Pikes Peak Poultry Show—Colorado Springs, Nov. 13—18; Harry D. Pierron.

Montrose Poultry Show—Montrose, Nov. 30—Dec. 2; Harry A. Ireland.

Grand Valley Poultry Show—Grand Junction, Dec. 4—5; R. E. Meserve.

Western Slope Poultry Show—Grand Junction, Dec. 6; R. E. Meserve.

Boulder County Club Poultry Show—Longmont, Dec. 8—9; Francis Yeager.

Northern Colorado Poultry Show—Fort Collins, Dec. 11—15; C. A. Kingham.

Canon City Poultry Show—Canon City, Dec. 19—21; W. W. Goodwin.

Greeley Poultry Show—Greeley, Dec. 26—29; W. H. Hargrove.

National Western Stock Show—Stock Yards, Denver, Colo., Jan. 15—20; W. C. Shuman, 400 S. Emerson st.

Monte Vista Stock Show—Monte Vista, Feb. 7—9; Earl A. Matzen.

Purebreds Excell by 40 Per Cent.

Purebred poultry has 40.7 per cent greater earning power than scrub poultry without taking into consideration its breeding or sale value. This high utility value of purebred stock has been shown as a result of a Government inquiry into the poultry business of the country, in which 525 farmers owning 30,000 fowls gave the results of their experience.

The superiority of purebreds on a utility basis is due principally to their better conformation and quality, increased production, more economical production, and earlier maturity. When purebred poultry breeding stock is used, the offspring is more salable than that of non-purebred stock and brings 50 per cent greater returns.

The information obtained shows conclusively that well bred poultry is good property, not simply for the experienced breeder, but for every farmer willing to give them proper care and opportunity to prove their worth. One farmer relates that the impelling force which prompted him to acquire purebreds was the need for more income. He reasoned that ownership of purebreds was not the proverbial wealthy man's diversion, but the poor man's necessity. Purebreds increased his returns 100 per cent.

This survey indicated that each breeder of purebred poultry influences, on an average, about nine other persons to raise superior stock. Of the chief influences which cause farmers to become breeders of purebred stock, the three foremost are: The reading of agricultual journals, general observations, and activities of county agents. The principal methods by which breeders expect to continue to improve their stock are: Use of superior males, careful selection and mating, and use of superior females.

Surplus purebreds are readily salable at satisfactory prices in a majority of cases.—P. C. J.

Hens Need Outdoor Exercise.

Good results in egg production can not be obtained when the flock is confined during the entire year, according to tests that have been made by the United States Department of Agriculture. The Department has kept a pen of fifty Rhode Island Red pullets and one of fifty White Leghorn pullets confined in poultry houses throughout the year, giving them a good variety of feed, including sprouted oats, and alfalfa meal, the latter being used in the mash. These trials have extended over three years and the result has always been the same—lower egg production and excessive mortality.

The Leghorns stood the confinement much better than the Rhode Island Reds, but even in this case the production was too low to be profitable. In the different years the pens averaged from 98 to 108 eggs per hen, while the other hens on the farm, given good yards or free range, produced from 125 to 160 eggs.

The hens that were confined to the house produced well during the winter months, but in the spring the yield was only fair and during the summer production almost ceased. Many poultrymen keep hens used for egg production confined during the winter months, and this practice is satis factory if the hens are not used for breeding. Hens kept as breeding stock should be given as much freedom as possible, regardless of the weather.

In these flocks that were kept penned up during the entire year there was a death rate of almost 50 per cent in the case of Rhode Island Reds, and 25 per cent in the Leghorn flock. Most of this loss occurred during the summer and fall months. Normal mortality in good-sized flocks kept in yards or given free range averages about 10 per cent, according to the Department's experience. The mortality is usually higher with general-purpose breeds than with the Leghorns.

There is no definite amount of yard space that must be supplied for hens, but the larger the yard the better. More hens can be kept on a certain space on light, sandy soil than on heavy soil, because the light soil is more easily cleaned by rain and sunshine. Where only small space is available it is advisable to use the double-yard system so that one yard can be used in growing a crop, while the other is used for the poultry. Alternating the use of these two yards for the hens keeps the soil in good condition and does not endanger the health of the hens.

Culling Got the Non-Layers.

Sixty hens belonging to Frank Meyers of Two Buttes, Colo., laid 183 eggs in the ten-day period before they were culled by a representative of the Colorado Agricultural College. In the next ten-day period the forty-five hens remaining after the culling laid 212 eggs and the culls in a pen by themselves, not an egg. This was certainly 100 per cent efficiency in culling out the non-producers.

If hens become addicted to the habit of feather pulling try giving them a tough piece of beef or a bone with tough, lean meat clinging to it. They will pick at this instead of pulling at feathers and will gradually get over the habit.

EASY NOW TO DOUBLE WINTER EGG YIELD

Proven Remedy Gives Remarkable Results—Turns "Boarder" Hens Into Profitable Layers.

Winter egg yields, double and treble those of former years, are now being made by many poultrymen through the use of a compound that science has finally perfected.

This wonderful medicine, which is called "Hick's Egg-Lay," contains rare and expensive ingredients mixed so as to quickly increase the egg yield. The medicine acts on the reproductive organs and causes double and treble the usual number of ova (the germ cell of the egg) to be produced. Thus you get many more eggs and get them during the time they bring the highest prices.

Hick's Egg-Lay is prepared for convenience in tablet form. Simply dissolve one tablet in a quart of water. This is the surest, easiest and quickest way ever discovered to get more eggs.

A Trial Costs You Nothing

Mr. Hick is so confident that Hick's Egg-Lay Tablets will double and treble your egg yield that he is making a special guaranteed offer of one regular double strength $1.00 package of Egg-Lay Tablets and a full size $1.00 package of Hick's famous Lice-Go Tablets all for $1.00.

Lice-Go is added to the drinking water. The medicine taken into the system of the bird comes out through the oil glands of the skin and every louse or mite quickly leaves the body. Keeps the birds always free without the poultry raiser doing any work. If you would rather have two $1.00 packages of Egg-Lay Tablets or two $1.00 packages of Lice-Go instead of one of each, say so on your order. Send $1.00 today (currency, money order, check, etc.) to Chas. M. Hick & Company, Dept. 936, 1018 So. Wabash Ave., Chicago, Ill. If you prefer, send no money. Just your name and address and pay postman $1.00 and postage on delivery. If after thirty days trial, you are not absolutely satisfied, write Mr. Hick and your money will be refunded. This offer is absolutely guaranteed, so don't hesitate to make the test.—Advt.

Dairying and Hog Raising

All letters regarding commercial and technical features of dairy farming and hog production promptly answered. Address all communications to Dairy Department, Western Farm Life, Denver, Colorado.

In selecting the sows to breed for the next crop of pigs, be certain that they come from litters in which there were eight or more strong and thrifty pigs. Prolificacy is hereditary.

It will pay to feed hogs at regular periods. They will know when feeding time comes and if they are fed at odd times as may happen to be convenient, they will do a lot of worrying at the feeder's expense.

In maintaining health in the hog herd cleanliness is a most important factor. It will pay to keep their sleeping quarters, feeding floors and troughs clean and thoroughly disinfected. Keeping the pens cleaned out is good for the pigs and the manure will help to fertilize the soil.

When you sell a purebred pig for breeding purposes, always deliver the pedigree papers or start them on the way at the same time that you ship the pig. It will save a lot of trouble later and will create a most favorable impression on the buyer. He may want to buy another pig sometime, and will most certainly be prejudiced in advance against a breeder from whom he got his papers only after a long delay and with much difficulty.

Grade Cows at National Dairy Show.

Grade cows owe their capacity as producers to their inheritance from the purebred or registered animals back of them. The grade cow was given an inning at the National Dairy Show at St. Paul this year for the first time, and there was much favorable comment on the exhibit. "This showing of grade cows was a close second in interest and importance to the purebred exhibit," said F. E. Ball, Deputy State Dairy Commissioner of Colorado, who attended this big national dairy exposition.

The exhibit consisted of about 100 cows from as many cow testing associations in Wisconsin and Minnesota. Each cow had produced from one to two pounds daily of butterfat during the previous year. Aaggie, the world's record grade cow, produced 20,932 pounds of milk and 817.4 pounds of butterfat, or 1,022 pounds of butter in one year. Just think—a grade cow producing 2¼ pounds of butterfat every day in the year. The purebreds are making such records possible, plus good feeding and care.

The fifteen-year experiment conducted at the Iowa experiment station showing the value of the purebred bull was featured, and many cow testing association members substantiated this experiment by giving practical experiences as proven out by the cow testing records.

In this Iowa test purebred Holstein, Guernsey and Jersey bulls were used on very inferior scrub cows, purchased in Arkansas. The grades of the first generation, when taken as a group, showed a 39 per cent increase in milk, and a 35 per cent increase in butterfat production The grades of the second generation, when taken as a group, showed an increase of 130 per cent in milk, and 109 per cent increase in butterfat, which is a striking tribute to the purebred sire.

Similar results can be obtained by any dairyman, the amount of increase depending upon the productive capacity of the foundation animals and the kind of bull used. The use of a purebred bull with plenty of producing capacity back of him is certain to result in a herd of higher producing cows, which means not only larger, but cheaper production and increased profits.

Feeding Value of Barley.

Barley has long been one of the standard feed crops of Europe. It is used almost exclusively as the grain feed in the production of the famous "Danish bacon." Barley is also used extensively in producing high quality pork in Canada. Barley can be grown under many conditions of altitude and climate where corn is not a practical crop. For that reason it is a crop that might more generally be grown through the mountain states. Barley comes on earlier in the season than corn and is more easily harvested.

Feeding tests at the Wisconsin experiment station show that for hogs, barley is worth about 92 per cent as much as an equal weight of corn. It must be ground, however, to give best results and should be supplemented with tankage. It is richer in protein, however, than corn, and after pigs have reached a weight of 75 pounds the tankage can be left out of the ration if they have good pasture. It is now generally known that hogs can be trusted to balance their own rations so the barley and tankage can be satisfactorily fed in self-feeders. Barley has a wider range of feeding use than oats, due to the fact that it is a more suitable feed for hogs. This, coupled with the fact that it usually outyields oats should lead to its increased use as a grain crop for feeding purposes.

When fed to horses it is always best to crush the grain, preferably by the use of a roller mill. While it is slightly less efficient pound for pound than corn, with most farm animals it seems equal to corn up to about 60 per cent of the ration in feeding dairy cows. Pound for pound it is above oats in feeding value.

Dairy Profit From Liberal Feeding.

Cows in Colorado cow testing associations with annual feed bills ranging from $90 to $100, returned practically double the profit of cows that consumed but $30 to $40 worth of feed during the year. The average observer in glancing at an association record might assume that the profitable cows are those with the low expense accounts charged against them. Such is not the case, however, as will appear following a careful study of the results obtained during the years 1921 and 1922 in the cow testing associations of Colorado.

In reporting these results, H. R. Lascelles, fieldman for the state dairy commission, points out that in eleven herds showing an average cost of feed ranging from $30 to $40, the value of production above feed costs was $71.19:

In nineteen herds showing an average cost of feed of $40 to $50, the value of produce over feed cost was $75.

In thirteen herds showing an average cost of feed of $50 to $60, the value of produce over feed cost was $87.40.

In seventeen herds showing an average cost of feed of $60 to $70, the value of produce over feed costs was $88.62.

In eight herds showing an average cost of feed of $70 to $90, the value of produce over feed cost was $119.55.

In four herds showing an average cost of feed of $90 to $110, the value of produce over feed cost was $135.07.

A study of these figures should prove to any man that with cows of reasonable capacity the greater profit comes from feeding the cows intelligently up to their maximum capacity for converting feed into milk.

Big Type Hogs Favorites.

There is no "best breed" of hogs, but within the different breeds the big type hog is finding most favor in nearly all parts of the conutry. This is pointed out in a recent Farmers' Bulletin, No. 1263, "Breeds of Swine," by E. Z. Russell, of the United States Department of Agriculture. This bulletin gives a brief history of all the breeds now found in the United States, descriptions of their characteristics, and names of the various record associations with names and addresses of the secretaries. It is well illustrated with photographs of typical specimens of most of the breeds.

The usual classification under lard and bacon types is given. The breeds included under the first are the Duroc Jersey, Poland China, Chester White, Berkshire, Hampshire, and Spotted Poland China. The Tamworth and the Yorkshire are the only breeds of the bacon type grown to any extent in this country and are the only ones included. The minor breeds given a place in the bulletin are the Mule-Foot, Large Black, Kentucky Red Berkshire, Cheshire, Essex and Victoria.

The big-type animals, says the author, are found in all breeds, but are more numerous in some breeds than in others. Owing to an increasing demand for cured hams and bacon of high quality, the type of hog becomes a matter of much importance. Hams weighing from twelve to sixteen pounds are more likely to cure with high quality and flavor than lighter or heavier pieces. Neither hams nor bacon should carry excessive quantities of fat, but should be "well marbled." The opportunity for producing meat of this character is greater in the quickly grown big-type hog than in the distinctly small-type. The most profitable hog is the one that can be grown to the required market weight in the shortest time. Well-bred and well-fed animals of the right type will make the market weight in from seven to ten months. The best market weight is generally from 175 to 225 pounds.

Copies of this bulletin may be obtained free by addressing the department at Washington, D. C.

Accuracy of Cow-Testing Records.

No dairyman need to hesitate in joining a cow-testing association, because the tests are taken only one day each month. Some have been disposed to question the accuracy of such tests. The method followed is to calculate the amount of milk and fat produced in the month from one day's production. In the annual report of a cow-testing association of Washington, the proprietor of one of the farms made the following statement relative to the results obtained:

"It may be of interest to you to know that the cow tester's records are within 3 per cent of the actual records. His costs of feed throughout the year is very accurate. As you know, we weigh every feeding for each cow and weigh and test our milk regularly for all of the cows which gives an excellent check against the cow-testing association records. If anyone is skeptical as to the accuracy of his production costs, this information might be of value to you. The tester's records are sometimes over ours and sometimes under ours, and the average works out very accurately for the year's work. With the cows on official test we also get a very good chance to compare the records of the tester with the actual records, and there is almost no variation. In this case the tester takes but one sample of one day's milking, whereas the official tester takes a sample of each milking covering the entire month, and the total fat for the month seldom varies as much as 2 per cent, and in such cases only as when a cow becomes sick at or near the time that the tester is testing for the month."

This statement should answer the question sometimes asked: "Are cow-testing association records accurate enough to warrant my joining a testing association." This letter is fully in accord with investigations made by the United States Department of Agriculture some years ago. Helmer Rabild, at one time in charge of dairy farming investigations for the Department, made the following statement:

"Through the kindness of Professor T. L. Haecker, access was had to the records kept of the production of the herd at the Minnesota State Experiment Station, St. Paul, Minn., where weights and Babcock tests of every milking of each cow in the herd have been recorded for nearly twenty years. The accuracy of the method used by the cow-testing associations was determined by comparing the yields as estimated by them and with the actual yields as determined by weighing and testing each milking. The maximum variation by the cow-testing association method was not over 5.1 per cent for any one year. For the average year it was found to be about 3 per cent variation. In the method used by the cow-testing association the total difference for a nine-year period is in no case over 2 per cent from the actual yield."

A 2 per cent variation would make a difference of only twelve pounds of butterfat on a 600-pound yearly record, and a difference of but three pounds on a 150-pound yearly record. A variation so slight would not materially change the classification of the individual members of a herd.

Feeding Potatoes to Hogs.

Potatoes should be cooked for hogs and fed with middlings, tankage, meat meal or fish meal in self-feeders. Potatoes are a highly carbonaceous feed and it is particularly important that they be supplemented with these protein feeds for growing shoats. The self-feeder is an efficient means of supplying these protein feeds in the proper proportion to hogs fed with potatoes.

Potatoes for Sheep.

Root crops are always a desirable addition to the ration of sheep and potatoes may be fed in about the same way as other root crops. The daily allowance should be from one to three pounds to a mature sheep. Potatoes should be used merely as the succulent part of the ration to be fed with a regular allowance of alfalfa hay and some form of cheap roughage.

WE USE THE DE LAVAL Cream Separator

86% of the Exhibitors at the 1922 National Dairy Show

held at Minneapolis, October 7-14, use De Laval Cream Separators. These exhibitors of purebred dairy cattle are the cream of the world's best dairymen—they know the best separator and use it.

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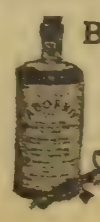

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WHITE WYANDOTTE COCKERELS, TRAP-nested. Mrs. Mary M. Wright, Rt. 2, Box 314, Boulder, Colo.

WHITE WYANDOTTE COCKERELS AND PULlets; show stock at two cockerels for $5, three pullets for $5. Mrs. B. Dougherty, Norwich, Iowa.

ORPINGTONS.

CHOICE SINGLE-COMB BUFF ORPINGTON PULlets. Lee Lantz, LaJunta, Colo.

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FOR SALE—R. C. BLACK MINORCAS—A FEW pullets and cockerels. Charles A. Welch, Columbus, Neb.

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WHITE ROCK COCKERELS, FISHEL STRAIN, $5 to $20. Beaty's Poultry Farm, Rocky Ford, Colo.

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NINETY BREEDS—POULTRY, EGGS, PIGEONS, dogs, baby chicks, parrots, ferrets, hares. Complete free folder. Bergey's Poultry Farm, Telford, Pa.

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IF IT WEARS FEATHERS WE HAVE IT OR will get it for you. Headquarters for pullets and cockerels. Have on hand classy lot of Barred Rock and Ancona pullets. Oat sprouters to get you winter eggs. Write or phone. Champney's Poultry Yards, 2057 S. Broadway, Denver, Colo.

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IDEAL MAMMOTH BRONZE PUREBRED GOLDbank, large-boned, vigorous, prize-winning stock. Toms, $10—20; hens, $6—10. Mrs. W. S. Linville, Lamar, Colo.

DUCKS AND TURKEYS.

MAMMOTH BRONZE HENS, 18 TO 20 LBS. each, $15; some June hatched pullets, $12.50; toms, $15. Instructions on raising turkeys, curing crop disease, blackheads and cause of it, $1. Sunnydale Poultry Farm, Wm. A. Draves, Prop., Keystone, Nebr.

MISCELLANEOUS.

NEED CHICKEN COOPS? WE LOAN THEM TO you free and pay you top market for your poultry. The Rhodes Ranch Egg Co., Denver, Colo.

RHODES MEANS HIGH PRICES, QUICK REMITtance and honest weights. Ship us your live or dressed poultry. The Rhodes Ranch Egg Co., Denver, Colo.

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STANDARD CHEMICAL PRODUCTS CO. PRODuces for poultry, Standard Poultry Spice, Powder, Germ Fluid for diseases, and Standard Poultry Powder. Recommended by many who are getting eggs, and sold through representatives of State Poultry Association, who will call on you in time. Standard Chemical Products Co., Denver, Colo.

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FOR SALE—REGISTERED GUERNSEY BULL, 4 years old. Alfred [illegible], Las Animas, Colo.

RANGE BULLS REGISTERED HEREFORDS at Northgate. The Lasses Purebred Cattle Co., Union Stock Yards, Denver.

BUY MORE PUREBRED REGISTERED cows, heifer calves, bulls. Circulars free. Hereford Farm, West Chester, Ohio.

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FOR SALE—TWENTY HEAD OF HIGH-GRADE Milking Shorthorn cows, bred to and sired by registered bulls. Also one 2-year-old registered Milking Shorthorn bull. V. T. Wyatt, Sedalia, Colo.

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BIG-TYPE POLAND CHINAS, BOTH SEXES, ALL ages. Write for prices and breeding. Gad Barney, Haswell, Colo.

FIRST-CLASS REGISTERED HAMPSHIRES, POland Chinas, and Chester Whites; boars and gilts; also White Wyandottes. Dyke Smith, Fleming, Colo.

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RAILWAY MAIL CLERKS, GOV'T CLERKS AND carriers needed; $1,500—$2,400; experience unnecessary. Particulars free. Write Mokane, Dept. B-11, Denver, Colo.

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AMBITIOUS MEN—WRITE TODAY FOR ATtractive proposition, selling subscriptions to America's most popular automobile and sportsman's magazines. Quick sales. Big profits. Pleasant work. Digest Publishing Co., 9659 Butler Bldg., Cincinnati, Ohio.

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AGED OWNER MUST SELL 318 ACRES WITH 10 horses, 10 cows, bull, 8 yearlings, 25 hogs, harnesses, vehicles, full implements, etc.; $3,300 income last year; delightful place to live; big money melons, potatoes, etc.; all tillable; 100 acre fields, 35 cow pasture, ample water, comfortable house, good barn, garage, stable, shop, etc. For quick sale, $8,900 gets all, part cash. Edw. I. Leland, Hugo, Colo.

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CASH BUYERS WANT FARMS AND RANCHES for spring. May I sell yours? R. A. McNown, 334 Wilkinson Bldg., Omaha, Nebr.

EXTRA CHOICE 120, $11,500; FINE LOCAtion; schools, churches; terms. Deal with owner. George Wortham, Worland, Wyo.

SELL YOUR PROPERTY QUICKLY FOR CASH, no matter where located. Particulars free. Real Estate Salesman Co., Dept. 11, Lincoln, Neb.

WANTED TO HEAR FROM OWNER HAVING farm for sale; give particulars and lowest price. John J. Black, 33rd Street, Chippewa Falls, Wis.

OWNERS OF FARMS AND RANCHES FOR SALE at a real bargain prices, should write us; we have cash buyers. Central Land Bureau, New Franklin, Mo.

A SNAP—I WILL SELL MY EQUITY IN 320-acre improved ranch, in northeastern Weld county, Colo., for $700. Write for particulars. Address G. J. Helphrey, Box 214, Route 1, South Haven, Mich.

U. S. RECLAMATION PROJECT, YELLOWSTONE Valley, Mont., irrigated lands, partly improved, $40 to $75 an acre, easy terms. Crops: Sugar beets, corn, alfalfa, etc. H. W. Byerly, 52 Northern Pacific Ry., St. Paul, Minn.

LUMBER

FIR LUMBER, MILLWORK, RED CEDAR SHINgles, fence posts, from mills to you. Send bill for delivered prices. Lumbertown, Box 909M, Everett, Wash.

MISCELLANEOUS

SEND FOR OUR WHOLESALE WEEKLY PRICE list, it will keep you posted on the rock bottom prices, and will help you save from 25 to 40 per cent on your supplies. Stock Growers Wholesale Supply Co., 1523 19th St., P. O. Box 1442, Denver, Colo.

BEST PARCHMENT BUTTER WRAPPERS, 8x11, neatly printed, 100, 60c; additional 100, 40c. Home Specialty Co., Middleton, Idaho.

PATENTS—BOOKLET FREE. HIGHEST REFerences. Best results. Promptness assured. Send model or drawing for examination and opinion. Watson E. Coleman, Patent Attorney, 624 F St., Washington, D. C.

WHY USE A DULL RAZOR WHEN ONE TUBE of Eversharp will keep your razor sharp for one year? Order now and get extrt tube free; $1, guaranteed or money back. Geo. F. Hayes, 293½ Weidler St., Portland, Ore.

NEW CROP—FANCY PURE SUGAR CANE SYrup; simply delicious; not to be compared with store-bought kinds; attractive prices. You save the middlemen's profit. Large sample 10c. See it, taste it. My nineteenth season. Farmer Hamlett, Route D, Houston, Texas.

LET US TAN YOUR HIDE—COW AND HORSE hides for fur coats and robes. Cow and steer hides into harness or sole leather. Catalog on request. We repair and remodel worn furs; estimates furnished. The Crosby Frisian Fur Co., Rochester, N. Y.

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TOBACCO — THREE-YEAR-OLD KENTUCKY leaf; pay for tobacco and postage when received; 3 lbs. chewing, $1; 4 lbs. smoking, $1; 7 lbs. No. 2 smoking, $1. Kentucky Tobacco Assn., Hawesville, Ky.

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NATURAL LEAF TOBACCO—CHEWING, 5 LBS. $1.75; 10 lbs., $3; 20 lbs., $5. Smoking, 5 lbs., $1.25; 10 pounds, $2. Pay when received. Tobacco Growers' Union, Paducah, Ky.

San Luis Valley Potato Show Scores Success.

(Continued from Page 5.)

Any Other Variety—1, Omar Underwood, Del Norte; 2, Henry Schmidt, Del Norte; 3, J. L. Wolfe, Hooper; 4, Joe Clark.

Class 4—Bliss Triumphs—1, Joe Clark; 2, no award.

Rurals—1, J. L. Wolfe; 2, Kernen & Torres, Del Norte.

Early Ohios—1, J. E. Kernen; 2, C. R. Robinson; 3, E. A. Thompson.

Any Other Variety—2, I. F. Rockey, Saguache.

Potato Club and Smith-Hughes Exhibits.

Class 5—Brown Beauties—1, Fred Diller; 2, Lloyd Robinson, Center; 3, Russel Patterson, Center; 4, Ralph Noffsinger, Center.

Russet Burbanks—1, Verl Johnson, Center; 2, Pat Delfrich, Center; 3, Dwight Moody, Center.

Peach Blows—1, Logan Eubanks, Center; 2, Robert Burns, Center; 3, Glen Johnston, Center.

Class 6—Brown Beauties—1, Fred Diller; 2, Lloyd Robinson; 3, Herbert Bowers, Center; 4, Eben Cole, Center.

Class 7—Russett Burbanks—1, Verl Johnston.

Peach Blows—1, Logan Eubanks; 2 and 3, Robert Burns.

Registered Seed Exhibits.

Class 8—Russett Burbanks—1, Sauder & McFee; 2, J. Wolfe; 3, Verl Johnston.

Peach Blows—1, O. F. Diller; 2, Everette Irons; 3, Sauder & McFee.

Brown Beauties—1, O. F. Diller; 2, Henry Specker; 3, Corbin Wright, Monte Vista; 4, H. S. Tyrrel, Monte Vista.

Bushel Samples Peach Blows.

Class 9—Best Bushel—1, Everette Irons; 2, O. F. Diller; 3, F. L. Johnston, Center.

Sweepstakes.

Markets—Russett Burbanks—Mrs. L. B. Linegan.

Seed, Registered—L. B. Finegan.

Seed, not Registered—Fred Diller.

Club Work—Verl Johnston.

Get Fowler Egg Farm White Leghorns for Eggs

A winter-laying strain. **The Bred-to-Lay Kind—247 to 288-egg blood.**

1923 BABY CHICKS and Hatching Eggs Will soon be Ready

By placing your order NOW you may rest assured that you will get your eggs or chicks just when you want them. PLAY SAFE THIS YEAR. Book your order NOW with the FOWLER EGG FARM and get started with a real strain of bred-to-lay Leghorns; the kind that will make you money right from the start.

Mr. Hayball, in Idaho, writes: "172 Pullets raised from your eggs have averaged me $4.75 per day for November and December —60 per cent daily egg yield."

Don't think such a record possible with any other strain of Leghorns. To do this you must have the FOWLER EGG FARM STRAIN of bred-to-lay Leghorns. Write today for our circular and prices which contains facts from our customers. Address

Fowler Egg Farm, Route 1-B, Fowler, Colo.

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Did YOU get satisfactory hatches last season?
Are you in the market for an incubator?

Investigate the Charters Incubator

BEFORE YOU BUY. WRITE FOR CATALOG.

Trim the wick only once a week. **Fill the lamp only once a week.**
The CHARTERS regulates itself automatically.
The best oil-burning hot-water incubator.

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S. L. SWEET, Mgr. ROMOCO POULTRY FAM, Littleton, Colo., Intermountain Distributor.

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This offer good for new or renewal subscriptions, and renewals will be extended from present date of expiration.

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Western Farm Life, Denver, Colo.:

Gentlemen—Enclosed herewith please find $1.00, for which send me Breeders Gazette for 12 months and Western Farm Life for 18 months.

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R. F. D..... Box..... STATE.....

Market Outlook for Farm and Ranch Products.

(Continued from Page 6.)

weakness. At present prices, by-product feeds are not out of line with corn and oats.

Prices per ton (100-pound bags) in carlots:

Chicago—Bran, $25; standard middlings, $26; flour middlings, $28.50; cottonseed meal, 36%, $47.50; 43%, $52; hominy feed, $30; gluten feed, $36.85; old process oil meal, $52.50; tankage, $65.

Seed Markets Hold Their Own.

Price changes in clover and grass seeds have been small, but gains in the last six weeks have been well held. Two-thirds of the alfalfa seed likely to be disposed of by growers has already been sold.

Egg Prices Show Phenomenal Advance.

Last August, when coolers were filled with the largest storage stock of eggs ever known and a heavy supply was still coming, fresh eggs sold at Chicago as low as 18 cents. They have advanced since to 55 cents, a gain of 200 per cent. The market is probably near the upper limit, but should hold around this level for a month or so. Storage eggs are working into a stronger position as the rate of distribution seems to be rapid enough to take care of most of the excess by the first of the year.

Poultry receipts have increased and stocks in storage are beginning to accumulate. Prices are holding much better than seemed possible in view of the big increase in production, although they are lower than two months ago.

Latest quotations:

Kansas City—Eggs, firsts, 46c; seconds, 25c; live poultry, broilers 23c; springs, 18c; heavy hens, 19c; light hens, 13c; roosters, 10c; turkeys, 35c; ducks, 18c; geese, 12c.

Denver—Eggs, 52@65c. Live poultry, hens, 15@18c; springs, 15@17c; roosters, 7c; turkeys, 28@30c.

Butter Market Maintains Advance.

Butter prices made slight additional gains last week and closed firm, although a nervous undertone was evident, many dealers feeling that the market had practically reached its upper limit. Retailers report that demand has fallen off considerably and dealers are of the same opinion so far as fresh butter is concerned. Buyers are turning more and more to storage butter in which the situation is strong In spite of the reported decline in consumptive demand, the rate of disappearance at the four leading markets in the first half of November was much greater than in the corresponding period of last year. Production is decreasing, as shown by reports to the American Creamery Butter Manufacturers' Association, but receipts have been unusually heavy partly because delayed shipments are now coming. Butter is being offered from New Zealand, but prices duty paid are practically on a parity with those of the country, and but small quantities have been bought. Since the trend of receipts is apt to be downward in the next few weeks, present prices should be maintained even if demand is checked to some extent.

Prices for 92-score fresh butter on November 18 were:

Chicago, 49½c; Boston, 50c; New York, 49c; Philadelphia, 51c.

Fruits and Vegetables.

Shipments of potatoes have fallen off about 50 per cent in the last month, but prices have not responded. Declines occurred on some of the consuming markets, but shipping points were generally steady. The chief drawback has been the lack of buying for winter storage as a result of the unfortunate outcome of storage operations last year. Many of the warehouses have not been filled, which points to the probability of a big advance later on. Northern Whites are quoted at 75 cents to $1.20 per 100 pounds in Mid-Western cities.

Shipments of boxed apples are running about as heavy as last year, but the supply of barrelled apples is about four times as heavy as a year ago. The total supply remains liberal, but prices are holding firm. New York Baldwins are quoted at $4 to $4.50, Greenings at $3.50 to $4.50, and Midwestern Jonathans at $5 to $6 in consuming markets.

Don't Trust the Bull.

Farmers who keep bulls might learn from tiger trainers a valuable lesson that, if put into practice, would make them better life insurance risks. No man trusts a tiger until it is dead. A bull, although he uses an entirely different method, can do just as much damage as any animal in the zoo or in the jungle. He is more vicious and treacherous than most of them, and with such a reputation no man should trust him for a minute, no matter what his record for good behavior has been. "Mean" bulls perhaps have killed fewer men than those considered safe.

There are few rural neighborhoods without a list of tragedies and near-tragedies resulting from putting trust in "perfectly gentle" animals. Only a few weeks ago an employe of the United States Department of Agriculture, visiting in New York State, was so badly injured by a dairy bull that he died a short time later. The owner led out the animal, always considered gentle, to have its picture taken. Without warning the animal knocked down his owner and then gored the Department employe who had rushed to the man's assistance.

Had this bull been led on a staff attached to the ring in his nose the tragedy could not have happened. Better still, it might have been kept in a pen so arranged that handling would not have been necessary at all. Plans for constructing safe bull pens may be obtained from the Department of Agriculture, Washington, D. C.

Every farmer who owns a bull would do well to put up this warning in his barn: "Don't Trust the Bull."

LIVESTOCK NOTES.

(C. N. Henry, Fieldman.)

Two Good Holstein Sales.

The Hall Brothers' sale at Western Holstein farm on November 20, was well attended and an average of $211.00 was paid for the catalogued offering. Mrs. Emma Saider paid the top of the sale, $600. Mr. and Mrs. James Gibson were good buyers for the best ones. Harry L. and Ada Luber bought some good ones. Mike Penrose, Sam Hansen, Baston & Donnely, Frank Bridgman, University of Wyoming, and a number of local people were the principal buyers. Buchanan, Henry, and Banks, were the auctioneers and Mr. James Gibson handled the pedigrees and is an expert in his line. He also handled the pedigress in the J. J. Kalberer sale.

The Whowell & Polly sale at Johnstown, November 22, was attended by a large crowd of people and the tent was filled to overflowing. The cattle came in in fine shape and while the prices were not high the cattle brought fair money. Mr. Ponsford of the Willow Springs Farm bought the top, a cow, for $625. Mr. Norris of Loretto Heights Farm bought some real ones, also Mrs. M. Penrose of Denver, Sam Crowley of Johnstown bought a lot of the good ones, and Donnely & Baston were among the buyers. Mr. Polly, manager, had everything ready and in fine shape. Colonels Joe Hays, G. N. Banks and H. C. Henry conducted the sale. H. C. Henry represented Western Farm Life.

Recent Range of Livestock Prices at Our Principal Markets.

Cattle—	Denver.	Kansas City	Omaha.
Medium heavy steers	$ 6.25@ 7.50	$6.50@ 8.85	$6.75@ 8.75
Common heavy steers	4.75@ 6.25	4.85@ 6.50	4.75@ 7.00
Medium light steers	6.00@ 7.25	6.25@ 8.40	6.50@ 8.50
Common light steers	4.50@ 6.15	4.50@ 6.25	4.50@ 6.75
Common to choice butcher heifers	4.75@ 6.25	4.00@ 8.90	3.75@ 9.00
Common to choice butcher cows	3.50@ 5.25	2.60@ 6.35	3.50@ 6.25
Bologna and beef bulls	2.00@ 3.00	3.15@ 5.35	2.75@ 6.00
Canners and cutters, cows and heifers	1.50@ 3.00	2.15@ 3.75	2.25@ 3.50
Canner Steers	2.00@ 3.75	2.25@ 3.65	2.50@ 4.00
Medium to choice light veals	6.00@ 8.50	6.25@10.00	7.50@10.00
Common to choice heavy veals	4.00@ 6.50	3.50@ 7.00	4.50@ 7.50
Common to choice feeders (1000 lb. up)	5.00@ 7.25	5.10@ 8.60	5.25@ 7.50
Common to choice feeders (750-1,000 lb.)	5.00@ 7.00	5.00@ 8.00	5.00@ 7.50
Common to choice stocker steers	4.50@ 7.00	4.25@ 8.00	4.50@ 7.75
Common to choice stocker cows and heifers	2.75@ 4.50	2.75@ 5.80	3.00@ 5.50
Hogs—			
Top of Market	$ 8.90	$ 8.25	$ 8.25
Bulk of Sales	8.00@ 8.80	7.85@ 8.20	7.35@ 8.20
Heavy (250 lb. up)	7.75@ 8.50	7.65@ 8.20	7.80@ 8.25
Medium (200—250 lbs.)	8.00@ 8.65	7.85@ 8.25	7.90@ 8.25
Light (150—200 lb.)	8.00@ 8.90	7.75@ 8.20	7.60@ 8.20
Light Lights (130-150 lb.)	7.50@ 8.50	7.75@ 8.25	
Smooth packing sows (250 lb. up)	7.50@ 8.00	6.80@ 7.45	7.35@ 7.70
Medium to choice pigs (130 lb. down)	7.00@ 8.00		
Stock pigs	6.25@ 7.00	7.75@ 8.50	7.00@ 8.00
Sheep and Lambs—			
Medium and prime lambs 84 lb. down)	$12.00@13.75	$12.75@14.50	$12.50@14.25
Culls and common lambs	10.00@12.00	8.25@12.75	8.00@12.75
Medium to choice ewes	4.50@ 6.75	5.00@ 7.75	5.25@ 7.50
Feeder lambs	11.75@12.75	12.00@13.25	11.25@13.35

COW BOY SURE HEATER for STOCK TANKS

Get a heater early. Write now for illustrated circulars and dealer's name, to

LASTS A LIFETIME

Convert grain and hay into butter and meat and save freight charges by heating the water for your stock with coke, wood, or coal in a

COW BOY TANK HEATER

Quickest to heat; strongest draft; adjustable grates; ashes removed without disturbing fire; keeps fire 24 hrs. Absolutely Safe; pays for itself in 2 months with 4 cows; Self Sinking; can be used in Wood, Steel or Concrete Tanks of any size. Most reliable, practical, efficient. Price reduced. Quality maintained. Thousands used everywhere.

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DUROCS

Buy them young and grow them yourself. Weaned pigs, regular price $25 to $50. Our specialty for short time on good farmers' boars, weaners, $15 and $20. Show prospects, weaners, $50. Are breeding now for fall farrow. Can sell you one or a car load. Our Blue Ribbon herd was the high winner at Denver. Write today.

The Blue Ribbon Live Stock Co.
C. F. Burke, Mgr. PUEBLO, COLO.

OUTSTANDING
HOLSTEIN BULL

We have for sale a yearling son of a three-year-old heifer who made 1,035 lbs. butter last year and 21,428 lbs. milk, making her fifth in the world for butter production and ninth for milk for the year 1921-1922. The bull calf is sired by a 30-lb. son of Johan Duchess De Kol Lad, a bull who has two world record sisters, and two world record daughters. Calf is mostly white and a beautiful individual.

WRITE FOR PRICE.
WHICH IS REASONABLE.

Mrs. R. G. Douglas, Rush, Colo.

Milking Shorthorns
THE MONEY MAKERS FOR THE FARMER.

You cannot go wrong by developing your herd into a dual-purpose paying proposition. This can be done at a small cost by securing one of our young bulls by Master Sam. Master Sam was first at the Irish Royal in dairy class, second in beef class. His dam, Maiden Fern, gave 12,330 pounds milk in 37 weeks. Maiden Fern has never been defeated in the show ring. See samples of Master Sam breeding at the International, Chicago, Dec. 2 to 9, and at the National Western, Denver, Jan. 13 to 20. Ask us about young bulls. We have them priced to sell.

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PRODUCTION
TYPE SIZE
We offer you a wonderful amount of these Holstein qualities—and from a clean herd. Bull calves from fine record dams. Pahgre Valley Ranch, Loesch Bros., Montrose, Colo.
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Buy a Calf Out of This Herd

Twenty cows in this herd on an official seven-day test averaged 446.13 lbs. of milk and 20.19 lbs. of butter.

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Milking Shorthorn Grades
Heifers and Young Cows

Reds and roans. Heavy in calf, and Springers. Especially selected from good herds. One or a carload, priced reasonably, quality considered.

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STOCKYARDS, DENVER, COLO.

Bates Shorthorns

are the foundation blood of true Milking Shorthorns. We have them. A few bulls for sale.

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from the oldest established herd in the state. We can supply your needs in bulls of beef type either horned or polled Shorthorns. Write Superintendent for folder on breeding and prices.

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Milking Shorthorns
All Cows in Milk Officially Tested.

Service bulls of World's Record breeding. Both males and females for sale. Personal inspection invited. Send for Illustrated Booklet.

THE BONVUE FARMS CO.,
Stockyards, Denver, Colo.

We have bred hundreds of prize-winning and high-producing Holstein cows, including

Tilly Alcartra

We can supply you with that same line of breeding. Write

McKAY BROS., Caddoa, Colo.

HOLSTEIN BULL

Western Payne Sir Colantha No. 274957. Beautiful Holstein Friesian bull, now for sale. Sure breeder. Good for large herd. Bred by Hall Bros.

WILLOW BROOK DAIRY,
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Phone Lakewood 68 J 5.

GREAT BARGAINS, 960 HEAD HEREFORDS, SHORTHORNS, ABERDEEN ANGUS

1, 2, 3, 4 and 5 years old. Cows, heifers and bulls. Prices $75 to $120 and up. 360 Percheron and Belgian horses, stallions, mares and colts, 1 to 6 years old. Prices $125 and up per head. One head or a carlot. Breeding guarantees with each. Registered pedigrees by mail. Stock on twenty farms in Iowa and Illinois. Write for circular and particulars. Address ILLINOIS HORSE & CATTLE CO., Good Block, Des Moines, Iowa.

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SPRING BOARS

A few real herd-headers left. Priced right for quick sale. Guaranteed breeders. Immuned and cholera immune. Write for prices and particulars.

WINDERMERE FARM,
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Brauer Purebred Duroc Co.
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The greatest individual lot of spring boars at moderate prices, to close out early. Now is your time to buy.

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We make a specialty of furnishing foundation herds. Show and Herd Boar prospects that combine the best of the greatest show herds ever produced. Literature, Wickwares and Tictoes. Free booklet etc., write N. E. MOSHER & SON, Hugo, Colo.

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Just a few real herd headers left ready to go at pre-war prices. Used with grade sows even, they will more than pay for themselves on the first crop of pigs. Write today.

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Livestock Auctioneer and Duroc Breeder.

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22% Cut In Price

MELOTTE, the Edison of Europe, manufacturer of the greatest Cream Separator the world has ever known, announces a sweeping reduction in prices. Labor conditions in general together with tremendous re-building and re-organizing efforts put forth by this big man of Belgium has resulted in cutting production costs to the bone.

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Vibration of a cream separator's bowl will soon cost you more money in cream waste than the price of your separator. U. S. Government Bulletin No. 201 says that a perfectly true motion of the bowl is *absolutely necessary*, the bowl is the vital part of any separator—the part where the cream separation takes place.

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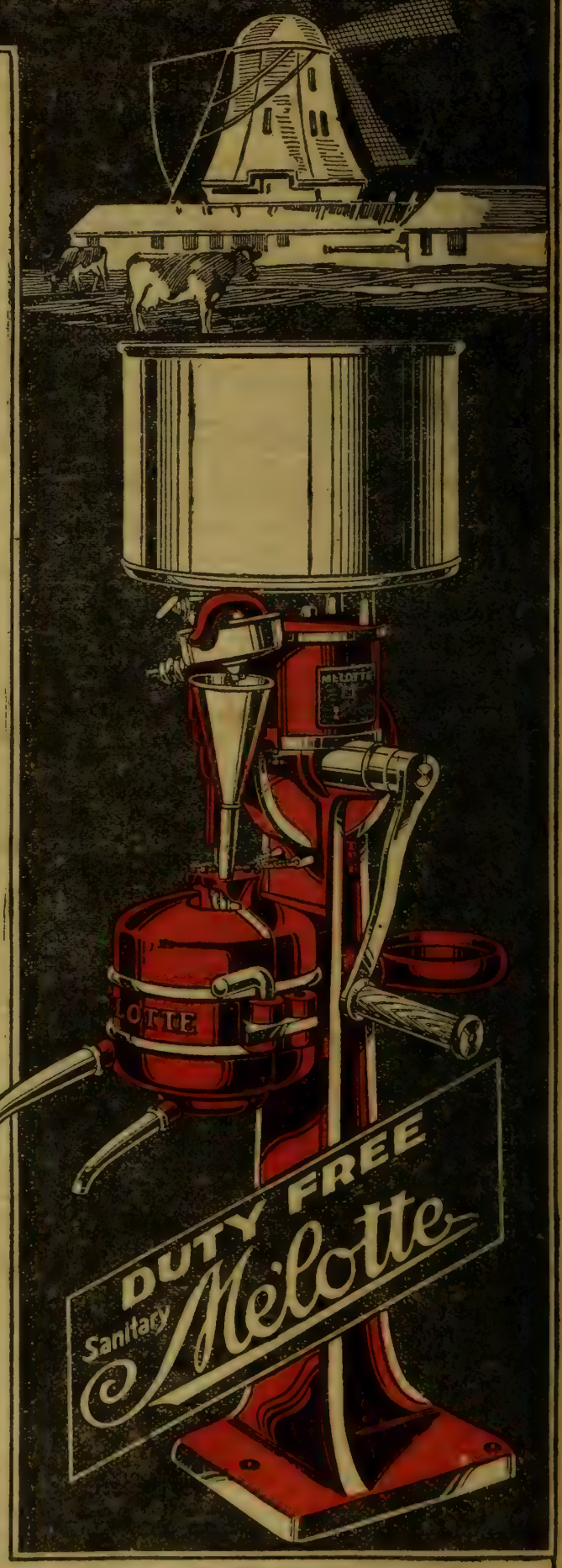
The Belgium Melotte is the only single-bearing-bowl separator made. This patented bowl hangs from one frictionless ball bearing and spins like a top. It is *self-balancing*. It skims as perfectly after 15 years' use as when new. Positively can not ever get out of balance—can not vibrate and thus cause cross currents which waste cream by re-mixing with the milk. The 600 lb. Melotte turns as easily as the 300 lb. machine of other makes. Spins for 25 minutes unless brake is applied. No other separator has or needs a brake. The Melotte bowl has solved the problem of perfect skimming.

$7.50 after 30 Days Free Trial



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Mail coupon for catalog giving full description of this wonderful cream separator. Read about the porcelain-lined bowl. Easy to clean as a china plate. One-half less tinware to clean. An exclusive Melotte feature. Other exclusive Melotte features described in full.

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A Thrilling Western Story by a Colorado Man—Commencing—Page 5

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WESTERN Farm Life

Vol. XXIV. *Denver, Colorado, December 15, 1922.* *Semi-Monthly*

THE WEST'S OWN SHOW.

SEVENTEENTH ANNUAL

National Western STOCK SHOW

—and—

HORSE SHOW

January 13-20, 1923

COME to Denver Stock Show Week for business, pleasure, amusement, entertainment, shopping, bull buying, bull selling, an educational feature for the whole family, a visit with old friends from all over—the greatest livestock exposition west of Chicago.

A School for Breeders and Stockmen Biggest Booster of Your Interests

REMERBER the Hereford and Shorthorn breeding cattle sales, Wednesday, January 17; the feeder cattle sale January 18. Buy that new purebred bull, stallion, or cockerel, at the Stock Show, where only animals of the highest quality can get in the money.

Only Show in the World for Carlots of Breeding Cattle.

FIFTY ACRES of exhibit space will be filled with the premier productions of the West in all classes of livestock—a larger show in many classes than the great International Livestock Exposition in Chicago.

BRING THE BOYS AND GIRLS

A few days at this show is better than many weeks in the classroom for real educational value.

Five Big Shows Combined

CATTLE HORSES SWINE
POULTRY MACHINERY

Fare and One-third Rate

On all Western Railroads

On Sale Jan. 12, 13, 14. Good Returning to Jan. 23.

Biggest Event of the Year.

Too Good to Miss

Big Eastern Herds Come to Denver Show

REDUCED RATES TO NATIONAL WESTERN ON ALL RAILROADS.

THOUSANDS who are eagerly looking forward to their annual visit to Denver during Stock Show week will be glad to learn of the fare-and-one-third rate recently announced by the railroads for that week. Many others who have not been to the National Western Stock Show for several years, will be on hand January 13 to 20 to see the greatest educational exhibit of the West.

The new rate applies to all western states from Missouri river points to Salt Lake, and from Montana to Texas. Large increases in attendance at all fairs and livestock expositions of the year indicate the renewed interest that has been taken this year in the exposition of modern type in things of the farm and ranch.

The show buildings are all steam heated and comfortable and visitors may look forward to having the opportunity of studying and enjoying in comfort a record-breaking collection of educational and amusement features. Livestock as usual will be given the greatest attention, and cattle, hogs, sheep, horses, from all sections of the country will be on exhibition. There will be exhibits of feed and forage, industrial exhibits, students' judging contests, exhibits showing modern packing-house methods. A visit to the National Western Stock Show may well be considered a mid-winter outing of exceptional opportunities for inspiration and instruction.

Entries Pouring In.

From the large classes of bovine aristocracy that will line up for the judges in the great arena, on out through the hundreds of carloads of cattle in the yards, and back to the industrial exhibits, every nook and corner of the West's great fifty-acre show will have something of interest and worth for the farmer-stockman.

Already entries are rolling in each day to the office of the secretary, and Harry L. Youngerman, the genial manager of the big show, predicts that the seventeenth annual exhibit of the best in the West will outshine any previous show.

Entries from a dozen stables of show horses will come from California, Illinois, Oklahoma, Missouri, Indiana and other states. D. Schilling, chairman of the National Western Horse Show committee, assures horse lovers of the West a treat never before staged in Denver.

Many Winning Herds to Exhibit.

The winnings at the American Royal show in Kansas City and the International Livestock Exposition in Chicago by entries from nine of the premier breeding herds of Herefords and Shorthorns in Colorado have brought great honor to the state. With them from these big shows will come many Eastern show herds to take issue with the breeders of the West on their home grounds.

There may be some people in the West who have marveled at the high placings received by Colorado breeders against eastern competition, but a visit to Denver will show them the reason. The man who misses the National Western Stock Show next month will miss the show that has been the most important single factor in the improvement of western livestock.

Shorthorn Breeders Organize.

In order to more effectively perform their part in spreading the gospel of better sires and more good livestock through the plains regions of Colorado, Shorthorn breeders of eastern Adams and Arapahoe counties have just formed an organization known as the Tri-Valley Shorthorn Breeders' Association. At a preliminary meeting held in Bennet several weeks ago the plans were made and at Strasburg recently the association came into official being. Most of the breeders of this section are developing herds of Milking Shorthorns and some of them have entered animals in the National Western Stock Show. Plans were made for a two-day show and sale some time in February, and all the members pledged themselves to prepare animals for this show and sale.

Farmers living in the vicinity of Bennett, Strasburg, Byers or Deer Trail who are interested in better livestock and particularly Shorthorns, are invited to join this new organization.

A small map showing the relation of the three valleys of Kiowa, Comanche and Bijou, will be used on the stationery of the association, and will definitely locate in the minds of livestock men the great plains region to the east of Denver along the Union Pacific, as a breeding ground for dual-purpose Shorthorns.

The officers and directors of the association are C. E. Eddleblute, Strasburg, president; R. C. Meador, Byers, vice-president; Fred Haupert, Bennett, secretary-treasurer; H. M. Mennenga, Strasburg, and G. M. Gordon, Bennett, directors.

The annual meeting will be held on the first Monday in October each year at Bennett, and the semi-annual meeting on the first Monday in April at Strasburg.

Colorado Club Girls Win Trip to Europe

THESE two Colorado club girls brought honor to their state and themselves by winning a three months' trip to Europe in the final contest conducted at the International Livestock Exposition in Chicago. In the interstate contest held at Colorado State Fair in Pueblo the Kit Carson county team consisting of Miss Elaine Hendricks (left in cut) and Miss Bertha Boger (right in cut) won the right to compete in the final contest at Chicago. Here they took second place, a team of Iowa girls winning first. The second award, however, carried the free trip to Europe also. The girls will visit various sections of France and give their canning demonstrations there in the interests of conservation of the products of the farm and garden as they have so effectively done in their respective home communities. It will be a wonderful trip for the girls and their club friends all over the state will rejoice that they acquitted themselves in such a manner as to win this signal recognition. To Miss Maude Sheridan, state club leader; W. R. Freeman, assistant state club leader; Miss Amelia Alexander, club leader of Kit Carson county, and others who so ably assisted in the club work, should go a large measure of credit for the excellent results these girls and others have attained.

Western Farm Life

A Western Magazine for Western Farmers and Stockmen

VOL. XXIV. DENVER, COLORADO, DECEMBER 15, 1922. No. 26.

International Is Record Show for Quality of Exhibits

NEVER BEFORE HAS SUCH UNIFORMITY CHARACTERIZED ANIMALS SHOWN

OTHER International shows may have had larger classes in some lines than the one recently held, but it is certain that none ever had such uniformly high-class animals, such close competition for ribbons, and such an absence of tail-enders. As one herdsman expressed it: "If you get a ribbon in this show you don't look to see what color it is. You thank the judge and put it in your pocket."

There was often little difference between the top and bottom of the long lines of cattle on account of the full classes. The big arena was given to the horses in the afternoon and to cattle in the morning, and the judging ran well on into Friday before the Shorthorns were finished.

Breeders Show Top Quality Steers.

The first day of the show belongs to the fat steer classes, of interest not only to the colleges and private breeders, but to the general public as well. While the breeder of purebred cattle may be more interested in the breed championships, the consumer looks on the fat steer as being more directly connected with his dining-room table. Not only were the classes well filled, and the quality better than ever, but it was distinctly noticeable that it was not the colleges, as heretofore, but the private breeders who were doing most of the winning. Next to the student judging contest, the colleges would rather win the fat steer championship than any other prize. Reputations have been made by animal-husbandry men on the basis of one International champion steer, but this was no year for college champions. Two causes operated to bring a heavy steer exhibit from the breeders: Slack bull sales the last two years, and the $500 prizes offered by both the Shorthorn and Hereford associations, should the grand champion steer be of their breed. So often have the Blacks won this honor, and so persistently have they advertised the fact, that the Whitefaces and roans have in self-defense determined that such one-sided winning shall cease.

Shorthorn Calf Grand Champion Bullock.

This was evidently the year for the Shorthorns to win, though the Herefords made a tremendous show for the place. Geo. W. Baker's steer from Littleton, Colorado Mixer, was there with his Kansas City grand championship ribbon, but had to bow before a fresher combatant from Kentucky, Ronald Woodford. The latter, a magnificent steer, had to contest the breed championship with another Colorado steer, DeWitt & Lamont's Mischief Domino, who had won the junior yearling prize, and winning again here went on to meet the other champions for the most coveted prize of all.

The grand championship contest was interesting from the type standpoint as well as in the eyes of the breed enthusiast. Ronald Woodford, the Hereford champion and conqueror of Colorado Mixer and a wonderful thick-fleshed yearling, went up against a Shorthorn calf, Chenoweth Jock, and one of the best that the breed has produced. The Hereford was both heavily and evenly fleshed, deep in the quarters and both wide and thick on back and loin and might easily have been considered a champion. The Shorthorn, however, was smooth as an egg, silky as a seal and carried not an ounce of waste. He was so calf-like in appearance that few would guess his weight within 200 pounds of the 1,010 pounds he had packed away under his hide. No one could doubt the quality of the meat he would make as a dressed carcass, and this gained him the much coveted purple. The Angus champion was not up to the mark set by previous "doddie" winners and the reserve honors fell easily to the Hereford.

Champion Steers Wins Big Money.

Chenoweth Jock sold for $1.25 a pound on foot, a total of $1,262.25. He won $50 in class, $100 as champion Shorthorn, $50 as champion under one year, any breed, $100 as

Chas. I. Bray.

grand champion, and $500 as special prize from the Shorthorn association—a total of $2,062.25. He was bought for the Congress hotel, Michigan avenue, Chicago, and will be slaughtered in another week, to be ready for Christmas week.

Colorado Hereford Steers Ranked High.

Colorado Mixer was the only entry from the Centennial State in senior yearlings. In junior yearlings, DeWitt & Lamont, Denver, won first on Mischief Domino. Ken Caryl Ranch, Littleton, second on Caryl; Dr. DeWitt, Denver, third on Playfellow; W. N. W. Blayney, fifth on Blayney's Pride 2nd. In senior steer calves, Blayney was sixth on Blayney's Pride; in junior calves Ken Caryl won second on The Duke; Dr. DeWitt, third on Mischief Domino 69th; Geo. W. Baker, Littleton, fourth on Mischief Mixer 21st, and Blayney fifth on Blayney's Pride 4th.

Hereford Breeding Show Outstanding.

The Hereford show was unbeaten for uniform excellence and quality. If any inferior animals were present, they were well disguised. It was a battle of champions in all classes. The Kansas City champion cow, Camden's Lady Woodford, from Versailles, Ky., went on through to the championship again, but her stable-mate, the gigantic Hartland Woodford, grand champion bull at Kansas City, got no higher than seventh in class. A. B. Cook of Helena, Mont., won first in aged bulls, and later the grand championship on Panama 110th, a son of Cuba's Panama. Blayney won sixth on Blayney's Domino, and Dr. DeWitt ninth on Anxiety 4th Jr.

In the two-year-olds, a meaty, low-set blocky bull, Brummel Fairfax 4th, stood first, while Perfect Dawn 3rd, a bull of outstanding scale and size, towered above him in second place. The remainder of the class was very even. The senior yearlings brought out the Colorado entrants in good form. Geo. A. Baker, Littleton, made third with Dale's Mixer, Blayney following with the typy Wyoming 17th in fourth place, then Cook, fifth; Blayney, sixth; Hazlett of El Dorado, Kan., seventh, and Ken Caryl Ranch, Littleton, ninth. In junior yearlings, DeWitt was third and sixth. In senior bull calves, Ken Caryl Ranch was ninth with Morton Fairfax, and A. B. Cook of Townsend, Mont., tenth on Panama's Choice; in junior yearling calves, Baker won fifth on Mischief Mixer 20th; for best three bulls, E. H. Taylor, Frankfort, Ky., first; W. N. W. Blayney, third; De Witt, fifth, and Cook, sixth; and for best two bulls, Taylor, first; Blayney, sixth, and DeWitt, tenth.

In cows, Ken Caryl Ranch did somewhat better, winning third on their champion cow, France Lassie 2nd, on the two-year-old Crystal Mischief, fourth on Lady Domino in senior yearlings, and sixth on Rebecca 2nd. Blayney's two-year-old, Cora Woodford, was eighth in her class. Cook took fifth in senior yearlings and seventh in senior heifer class. Baker was fifth in senior heifer class, and DeWitt ninth in junior yearlings and second, sixth and seventh in junior heifer calves.

In aged herds, Senator Camden was first, Cook second, Jesse Engle & Sons third, Ken Caryl fourth, and Dr. DeWitt sixth. In yearling herd, Blayney was sixth and DeWitt ninth. In calf herd, Baker was third and Blayney twelfth. In get of sire, Baker was eighth and Blayney ninth. The latter class was particularly strong and the groups very uniform.

Colorado Shorthorn Heads Two-Year-Old Bulls.

The aged Shorthorn bull class developed into a three-cornered contest for top between the Carpenter & Ross entry, Maxwalton Monarch, the Maryvale winner; Queen's Guard, and Rosenberger's Kansas City champion, Maple Rose Pride. The Maxwell-Miller Company of Littleton appeared in seventh and eighth places with Princely Stamp and Proud Duke Beaufort. Princely Stamp is beginning to feel the effect of his four years in the show ring, and has not the bloom he once had, but his offspring in the junior classes are sufficient excuse. The two-year-old bull class brought the Maxwell-Miller Company to the top, winning with Modest King, a roan of excellent lines and breed type. In senior yearlings, the Allen Cattle Company of Colorado Springs appeared with Divide Supreme in seventh place. Divide Supreme was recently bought by C. A. Melburn of Elbert. A full brother of this bull, Divide Superb, stood third among the senior calves, and was a strong contender for first. This is one of the best young Shorthorn bulls we have ever seen. He lacks nothing in character and breed type and needed only a little more flesh to win. Max-Mill Bishop followed in eighth place for Maxwell-Miller. Allens' won twelfth in junior calves with Divide Stamp.

In aged cows with calf at foot the blue went to Maryvale Farms, Youngstown, Ohio, on Lovely Thaxton, a beautiful red cow of great smoothness. Cloverleaf Lovely, former grand champion at Denver, won second for Maxwell-Miller. She is showing in fine shape, but her long campaigns on the show circuit have left her a bit rough on the pinbones to go higher. She has a worthy successor to herself at foot that will undoubtedly be heard from later. Max-Mill Myrtle from the same herd was third in the dry cow class.

The Kansas City champion female, the two-year-old heifer Supremacy, shown by ex-Governor A. C. Shallenberger of Alma, Neb., came to the top in her class and was a strong contender for the grand championship. Max-Mill Susan by Princely Stamp won fifth for the Littleton herd in this group, and was well entitled to the place. In the senior yearling heifers the Allen Cattle Company had a beautiful dark roan daughter of Meteor, Divide Maid 2nd, winning third. She was seriously considered for first and would have won with a little more flesh, being unexcelled in breed type and femininity. In junior yearlings, Max-Mill Secret, a daughter of Lothian Marmion, was fifth for Maxwell-Miller Company. In senior heifer calves Maxwell-Miller Company was tenth on Max-Mill Lady Annie, and the Allen Cattle Company twelfth on Divide Bountiful.

The grand championship on bulls went to Carpenter & Ross on Maxwalton Monarch. Maryvale Farms took female championship on Lovely Thaxton. Maxwell-Miller Company won third on aged herd.

Colorado Mixer, purebred Hereford yearling senior steer shown by George W. Baker of Littleton, Colo. Champion Hereford steer at American Royal Stock Show in Kansas City and a close contender for first in his class at the Chicago show.

Colorado Milking Shorthorns Win High Places.

There was a strong show of Milking Shorthorns, the Otis herd of Willoughby, Ohio; Thos. Harrison of Santa Rosa, Calif., and the Innisfail herd of Davis, Calif., winning championships. The Pine Valley Farms Company of Colorado (Turn to Page 20)

How to Get Good Seed Germination on Plains Farms

PROPER STORAGE AND HANDLING DURING WINTER AMONG FACTORS INVOLVED

E. R. Parsons.

GETTING seed to germinate properly is an important problem wherever there is scarcity of moisture, but there are other factors than soil moisture involved, such as the proper storing and handling of the seed during the winter months. A seed consists of two important parts, the germ which forms the sprout, and the matrix, consisting of some kind of starch or other carbonaceous matter which nourishes it. As the germ commences to grow this starchy matter decomposes, forming the sap constituents which support it until the roots commence to function.

What is the life of a seed or plant and why does it grow? Life is still a mystery and about all we know concerning it is that there is no life without the protoplasmic cell. The life of the seed then is buried in these cells of the germ. So long as the protoplasm remains intact the seed is alive. If the protoplasm is destroyed the seed is dead. In the cells of a growing plant this living substance is of a jelly-like consistency, but in the germ of a seed it is much drier and of a more viscid nature. If it becomes entirely and absolutely dry the seed is dead, but there is no danger of this for all seeds (and even dry vegetation) absorb moisture from the air and so protect themselves.

Extreme Heat Destroys Seed.

When grain or seed of any kind is kiln-dried with several hundred degrees of heat, all moisture is driven off and the life of the protoplasm destroyed and consequently all germinating power. Thus, seeds may easily be damaged by artificial heat, but not by any ordinary summer temperatures, for the hygroscopic moisture cannot be driven off without baking or kiln-drying.

What is the effect of low temperatures on the germinating power of seeds? The damage that may accrue results entirely from freezing of the germ when it contains too much moisture. If the cells contain above a certain percentage of water the moisture freezes and the expansion ruptures them, which of course kills the germ. It has often been noticed that in outdoor corn cribs the grain from the inside germinates better than that from the outside. The outside grain has contained too much moisture and has been exposed to freezing. Even in a cellar grain may absorb too much moisture and be injured as a result. The ideal place to store seed is dry, well ventilated and not too cold.

How Long Will Seed Keep.

A question we are sometimes asked is, how long can seed be kept without impairing its power to germinate? Seeds differ in this respect, but it is noticed that while the percentage of deterioration is very small for the first two or three years, it increases rapidly after the fourth year, and after the tenth or twelfth year the percentage of germination is very small. There is much difference of opinion, however, as regards the longevity of seeds. We often read in the newspapers of some wonderful plant or other that was obtained by some one from a seed which was found in the pyramids of Egypt, the ruins of Pompeii or the storehouses of the ancient cliff-dwellers. Our plant biologists, however, give it as their opinion that these are nothing but fairy stories.

It is of the utmost importance to farmers that such seeds as corn, beans, or such seeds as are often planted one in a hill, should germinate as near to a hundred per cent as possible, otherwise the yield will be badly cut or the added expense of replanting will have to be met. In buying seeds it is well for the purchaser to know whom he is dealing with, for some dealers are not above selling their old stock to farmers, or working it off by mixing it with the new.

Overcoming Poor Germination.

As for grains and crops which are drilled in, if the operator tries them out and knows their germinating percentage he can easily add an extra pound or two of seed to supply the deficiency. When free water is plentiful in the soil during or after rains, seeds will absorb as much as four times their weight of water while sprouting and will root very quickly; but when the soil is drier and contains only a little above the film content the sprouting is much slower. In dry years row crops always can be started by plowing or listing down to the moisture line, and planting the seeds below it, and if the farmer follows the correct methods he will always have a moisture line within a few inches of the surface. If after irrigation, the field is plowed as soon as possible, harrowed behind the plow and the seed drilled at once, it will come right up. So on the plains farm, if the field has been plowed beforehand and a good rain comes the grain can be seeded as soon as the surface is dry enough not to be sticky. Good seed is often wasted in the fall of the year by running it in on stubble and sometimes on plowed ground when the soil is dry underneath; a light rain comes, sprouts the seed, and if a dry spell follows just a few days too long, the shoots wither, the germ dies, and the stand is ruined. The remedy is not to plant until there is some moisture in the soil and then plant deep—three inches at least, for then if sufficient precipitation falls to start the seed at that depth, there will be enough moisture with what is underneath to sustain the plant until more rain or snow arrives.

Do Not Buy Poor Seed.

It is the poorest kind of economy to buy cheap seed, for like the cheap cow, it is an expense, not a profit. The idea of a man slaving all summer to raise a poor crop as a result of planting cheap seeds is beyond all comprehension. Nothing in the way of seed is too good for the farmer, and the larger the grains the bigger and stronger the sprout. In the matter of corn, seed selection is easy, for the boss can take his boys into the field and hunt for the finest and most perfect ears, and it is better to do this and safeguard their germination than it is to wait until after husking time, when the thawing and freezing may have reduced their vitality. There are farmers who not only carefully select their seed corn, but also use special screens for wheat, saving only a few pounds of the largest grains for seed out of every bushel. This does not take long and can be done in the barn in stormy weather.

Crops "Running Out."

We often hear complaints that corn and other grains, usually some particular kind, are "running out" in some localities. The cause of this is sometimes loss of soil fertility, but more often, especially in the case of corn, it is the result of inbreeding. When a man plants his own seed corn year after year, grains from the same area grow into plants and the pollen from one fertilizes the silks of the other and in this way the corn in the whole field soon becomes too closely related.

Fruit trees have bisexual blossoms and are often self-fertilized, but the fruit is finer and the trees usually set a larger crop when another variety rich in pollen is planted in adjoining rows. It is the same way with corn, in fact, with everything in nature—fresh blood makes for stronger progeny. The remedy therefore for this "running out" is to introduce unrelated seed. The easy way is to trade seed with a neighbor—half of yours for half of his.

Get Seed From Different Soil.

When grain crops such as wheat, which is almost entirely self-fertilized, commences to deteriorate, the best plan is to obtain seed raised on a different soil. If your soil is black loam, then trade all your seed for an equal amount raised in stiff red soil and the yield will come back. If it does not, the "running out" must be due to soil depletion and the fields need fertilizing. Corn reacts strongly to the introduction of fresh blood, of the same variety, but even more strongly to that of a different variety. Therefore crossed corn bears a heavier crop than either of the original parents, but in order to hold this larger yield the crossing must be kept up by mixing with another kind every year or so.

Ears of corn which are very much larger than the average of the crop and of which only one or two are found in a whole field, may be classed as freak ears, and are disappointing in the fact that they seldom reproduce their kind for, being accidental variants, they have not the full potency of heredity at their back.

Diversified Farming Pays Huerfano County Farmer

MILK COWS, HOGS AND POULTRY MAKE A WINNING COMBINATION

S. L. Owens.

GETTING $1 a bushel for corn fed to hogs when it was bringing 40 cents on the market, was one feature of the successful farming practice of Darwin Ouderkirk, a plains farmer of Huerfano county. "It takes milk cows, hogs and poultry to make farming pay under the conditions prevailing in this section," says Mr. Ouderkirk. While many farmers are having serious financial troubles due to crop failure and low prices for farm products, Mr. Ouderkirk is making some money on his Turkey Ridge farm with his combination of milk cows, hogs and poultry.

Selling Feed to Livestock.

The spring of 1921 the crops on the Ouderkirk farm consisted of fifty acres of corn and twenty acres of cane. To convert the crop into marketable form there were forty range cattle, including calves, and enough hogs for home meat. The work horses, four head, also had to be fed. Mr. Ouderkirk had leased an additional 200 acres of native grass upon which to pasture the cattle.

He started to turn some of the feed into cash through the cream check route in the fall, beginning by purchasing six grade Holstein cows for $60 each. To help take care of the skim milk he also purchased six unregistered Poland China gilts five months old for $15 each. Only three of the cows freshened during the winter months, but the price of cream was high and the returns were good. The other three came fresh the following spring. In all eight cows were milked during the spring, summer and fall of 1922. In addition to the six Holsteins a grade Shorthorn and a Hereford showing some signs of milk production were put up and milked.

These milk cows were given no special attention or care, being fed nothing but corn fodder and cane during the winter, with what little they got from running on the range. In the spring and summer they ran on a seven-acre patch of Petkus rye and three acres of yellow and white sweet clover. With this feed, which any farmer can produce under similar conditions, these cows returned in cream sold $255 in one year, to say nothing of the skim milk which was fed to the hogs and chickens. The sweet clover, which was sowed the spring of 1922, pastured seven cows and twenty-five shoats after June 9. As an experiment, Mr. Ouderkirk tried taking the cows off the sweet clover and turning them on the native pasture, and they fell off four gallons a day in milk.

Five of the six gilts farrowed twenty-five pigs, which were sold when six months old for $480. The sows and pigs were fed nothing but what was raised on the farm. They had the run of the rye and sweet clover pasture and had the skim milk with plenty of corn. As soon as the litters were weaned the sows were rebred and five of them now have their second litters as the pigs of the first are going to market. Mr. Ouderkirk says he didn't realize what it meant to have these hogs to market the corn he had grown until he went to sell a hundred bushels which brought but $40. He figures that feeding it to hogs it has made a return of $1 a bushel.

As a return from the range cattle, twelve yearlings and eleven two-year-olds are being fed out for the December market from twenty acres of this year's corn crop. Mr. Ouderkirk estimates that these animals will return at least $900 when sold.

Pigs supplementing their corn and skim milk with pasture.

Wife a Producing Partner.

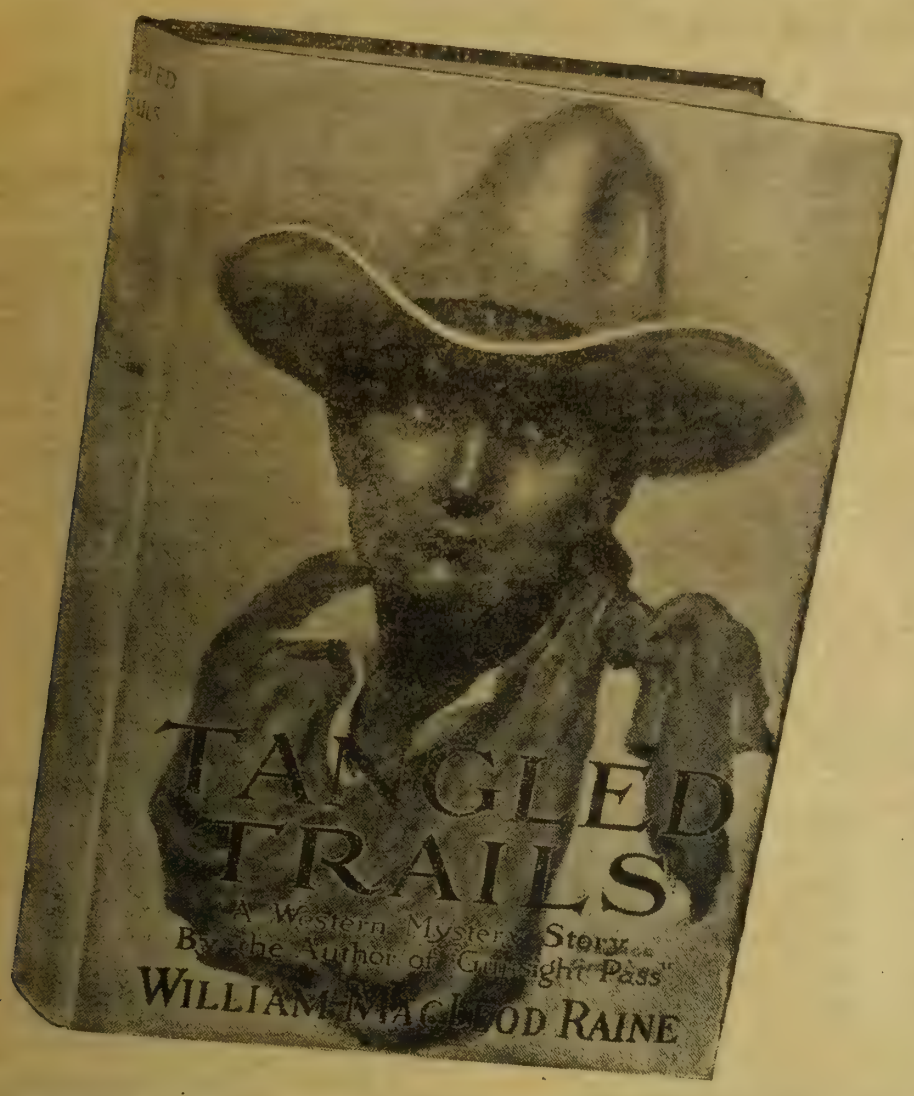
In checking up on a farm business the story is not complete until the work of the women has been figured in. Mr. Ouderkirk will have to steam up or his wife will surpass him in bringing in revenue. In addition to carrying on the usual household duties, which is no light task, Mrs. Ouderkirk managed to raise and sell $250 worth of turkeys last Thanksgiving and had forty ready for this year's market. From her hens she sold $122 worth of eggs and received $22 for the cull hens sent to market in the early fall.

Figuring up Mr. Ouderkirk's sales in this last year, we have the following: Cream, $255; hogs, $480; twenty-three steers to be sold in December, $900; turkeys, $250; eggs, $122; hens, $22; corn, $40, making a total of $2,069.

Mr. Ouderkirk has been farming in this location just five years. He claims to have no better land than the average upland farmer of Huerfano county. The only advantage which he might have over some is that he has an unlimited amount of water in his well which he dug and harnessed up with a gasoline engine.

The passer-by can easily tell that Mr. Ouderkirk is prospering. His fences are well kept up, the house is painted, his cattle have shelter, the feed yard is never empty and his farming tools are being given good care.

A Thrilling Book-Length Western Mystery Story



Tangled Trails

By William MacLeod Raine

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ESTHER McLEAN brought the afternoon mail in to Cunningham. She put it on the desk before him and stood waiting, timidly, afraid to voice her demand for justice, yet too desperately anxious to leave with it unspoken.

He leaned back in his swivel chair, his cold eyes challenging her. "Well," he barked harshly.

She was a young, soft creature, very pretty in a kittenish fashion, both sensuous and helpless. It was an easy guess that unless fortune stood her friend she was a predestined victim to the world's selfish love of pleasure. And fortune, with a synical smile, had stood aside and let her go her way.

"I . . . I . . ." A wave of color flooded her face. She twisted a rag of a handkerchief into a hard wadded knot.

"Spit it out," he ordered curtly.

"I've got to do something.....soon. Won't you—won't you—?" There was a wail of despair in the unfinished sentence.

James Cunningham was a grim, gray pirate, as malleable as cast iron and as soft. He was a large, big-boned man, aggressive, dominant, the kind that takes the world by the throat and shakes success from it. The contour of his hook-nosed face had something rapacious written on it.

"No. Not till I get good and ready. I've told you I'd look out for you if you'd keep still. Don't come whining at me. I won't have it."

"But——"

Already he was ripping letters open and glancing over them. Tears brimmed the brown eyes of the girl. She bit her lower lip, choked back a sob, and turned hopelessly away. Her misfortune lay at her own door. She knew that. But—— The woe in her heart was that the man she had loved was leaving her to face alone a night as bleak as death.

Cunningham had always led a life of intelligent selfishness. He had usually got what he wanted because he was strong enough to take it. No scrupulous nicety of means had ever deterred him. Nor ever would. He played his own hand with a cynical disregard of the rights of others. It was this that had made him what he was, a man who bulked large in the sight of the city and state. Long ago he had made up his mind that altruism was weakness.

He went through his mail with a swift, trained eye. One of the letters he laid aside and glanced at a second time. It brought a grim, hard smile to his lips. A paragraph read:

"There's no water in your ditch and our crops are burning up. Your whole irrigation system in Dry Valley is a fake. You knew it, but we didn't. You've skinned us out of all we had, you damned bloodsucker. If you ever come up here we'll dry-gulch you, sure."

The letter was signed, "One You Have Robbed." Attached to it was a clipping from a small-town paper telling of a meeting of farmers to ask the United States District Attorney for an investigation of the Dry Valley irrigation project promoted by James Cunningham.

The promoter smiled. He was not afraid of the Government. He had kept strictly within the law. It was not his fault there was not enough rainfall in the watershed to irrigate the valley. But the threat to dry-gulch him was another matter. He had no fancy for being shot in the back. Some crazy fool of a settler might do just that. He decided to let an agent attend to his Dry Valley affairs hereafter.

He dictated some letters, closed his desk, and went down the street toward the City Club. At a florist's he stopped and ordered a box of American Beauties to be sent to Miss Phyllis Harriman. With these he enclosed his card, a line of greeting scrawled on it.

A poker game was on at the club and Cunningham sat in. He interrupted it to dine, holding his seat by leaving a pile of chips at the place. When he cashed in his winnings and went downstairs it was still early. As a card-player he was not popular. He was too keen on the main chance and he nearly always won. In spite of his loud and frequent laugh, of the effect of bluff geniality, there was no genuine humor in the man, none of the milk of human kindness.

A lawyer in the reading-room rose at sight of Cunningham. "Want to see you a minute," he said. "Let's go into the Red Room."

He led the way to a small room furnished with a desk, writing supplies, and a telephone. It was for the use of members who wanted to be private. The lawyer shut the door.

"Afraid I've bad news for you, Cunningham," he said.

The other man's steady eyes did not waver. He waited silently.

"I was at Golden today on business connected with a divorce case. By chance I ran across a record that astonished me. It may be only a coincidence of names, but——"

"Now you've wrapped up the blackjack so that it won't hurt, suppose you go ahead and hit me over the head with it," suggested Cunningham dryly.

The lawyer told what he knew. The promoter took it with no evidence of feeling other than that which showed in narrowed eyes hard as diamonds and a clenched jaw in which the muscles stood out like ropes.

"Much obliged, Foster," he said, and the lawyer knew he was dismissed.

Cunningham paced the room for a few moments, then rang for a messenger. He wrote a note and gave it to the boy to be delivered. Then he left the club.

From Seventeenth street he walked across to the Paradox Apartments where he lived. He found a note propped up against a book on the table of his living-room. It had been written by the Japanese servant he shared with two other bachelors who lived in the same building.

"Mr. Hull he come see you, He sorry you not here. He say maybe perhaps make honorable call some other time."

It was signed "S. Horikawa."

Cunningham tossed the note aside. He had no wish to see Hull. The fellow was becoming a nuisance. If he had any complaint he could go to the courts with it. That was what they were for.

The doorbell rang. The promoter opened to a big, barrel-bodied man who pushed past him into the room.

"What you want, Hull?" demanded Cunningham curtly.

The man thrust his bull neck forward. A heavy roll of fat swelled over the collar. "You know damn well what I want. I want what's comin' to me. My share of the Dry Valley clean-up. An' I'm gonna have it. See?"

"You've had every cent you'll get. I told you that before."

Tiny red capillaries seamed the beefy face of the fat man. "An' I told you I was gona have a divvy. An' I am. You can't throw down Cass Hull an' get away with it. Not none." The shallow protuberant eyes glittered threateningly.

"Thought you knew me better," Cunningham retorted contemptuously. "When I say I won't, I won't. Go to a lawyer if you think you've got a chance. Don't come belly-aching to me."

The face of the fat man was apoplectic. "Like sin I'll go to a lawyer. You'd like that fine, you double-crossin' sidewinder. I'll come with a six-gun. That's how I'll come. An' soon. I'll give you two days to come through. Two days. If you don't—hell sure enough will cough."

Whatever else could be said about Cunningham he was no coward. He met the raving man eye to eye.

"I don't scare worth a cent, Hull. Get out. Pronto. And don't come back unless you want me to turn you over to the police for a blackmailing crook."

Cunningham was past fifty-five and his hair was streaked with gray. But he stood straight as an Indian, six feet in his socks. The sap of strength still rang strong in him. In the days when he had ridden the range he had been famous for his stamina and he was even yet a formidable two-fisted fighter.

But Hull was beyond prudence. "I'll go when I get ready, an' I'll come back when I get ready," he boasted.

There came a soft thud of a hard fist on fat flesh, the crash of a heavy bulk against the door. After that things moved fast. Hull's body reacted to the pain of smashing blows falling swift and sure. Before he knew what had taken place he was on the landing outside on his way to the stairs. He hit the treads hard and rolled on down.

A man coming upstaiirs helped him to his feet.

"What's up?" the man asked.

Hull glared at him, for the moment speechless. His eyes were venomous, his mouth a thin, cruel slit. He pushed the newcomer aside, opened the door of the apartment opposite, went in, and slammed it after him.

The man who had assisted him to rise was dark and immaculately dressed.

"I judge Uncle James has been exercising," he murmured before he took the next flight of stairs.

On the door of apartment 12 was a legend in Italics engraved on a calling card. It said:

James Cunningham

The visitor pushed the electric bell. Cunningham opened to him.

"Good evening, Uncle," the younger man said. "Your elevator is not running, so I walked up. On the way I met a man going down. He seemed rather in a hurry."

"A cheap blackmailer trying to hold me up. I threw him out."

"Thought he looked put out," answered the younger man, smiling politely. "I see you still believe in applying direct energy to difficulties."

"I do. That's why I sent for you." The promoter's cold eyes were inscrutable. "Come in and shut the door."

The young man sauntered in. He glanced at his uncle curiously from his sparkling black eyes. What the devil did James, Senior, mean by what he had said? Was there any particular significance in it?

He stroked his small black mustache. "Glad to oblige you in any way I can, sir."

"Sit down."

The young Beau Brummel hung up his hat and cane, sank into the easiest chair in the room, and selected a cigrette from a gold-initialed case.

"At your service, sir," he said languidly.

CHAPTER II.

Wild Rose Takes the Dust.

"Wild Rose on Wild Fire," shouted the announcer through a megaphone trained on the grand stand.

Kirby Lane, who was leaning against the fence chatting with a friend, turned round and took notice. Most people did when Wild Rose held the center of the stage.

Through the gateway of the enclosure came a girl hardly out of her teens. She was bareheaded, a cowboy hat in her hand. The sun, already slanting from the west, kissed her crisp, ruddy gold hair and set it sparkling. Her skin was shell pink, amber clear. She walked as might a young Greek goddess in the dawn of the world, with the free movement of one who loves the open sky and the wind-swept plain.

A storm of hand-clapping swept the grand stand. Wild Rose acknowledged it with a happy little laugh. These dear people loved her. She knew it. And not only because she was a champion. They made over her because of her slimness, her beauty, the aura of daintiness that surrounded her, the little touches of shy youth that still clung to her manner. Other riders of her sex might be rough, hoydenish, or masculine. Wild Rose had the charm of her name. Yet the muscles that rippled beneath her velvet skin were hard as nails. No bronco alive could unseat her without the fight of its life.

Meanwhile the outlaw horse Wild Fire was claiming its share of attention. The bronco was a noted bucker. Every year it made the circuit of the rodeos and only twice had a rider stuck to the saddle without pulling leather. Now it had been roped and cornered. Half a dozen wranglers in chaps were trying to get it ready for the saddle. From the red-hot eyes of the brute a devil of fury glared at the men trying to thrust a gunny sack over its head. The four legs were wide apart, the ears cocked, teeth bared. (Turn to Page 10)

Market Outlook for Farm and Ranch Products

FOREIGN WHEAT BUYING SHOWS BIG LATENT DEMAND EXISTS

Edited by Glenn G. Hays.

A COMPLETE reversal of form occurred in the cattle market last week as a result of lighter receipts from the range and less pressure from short-fed and warmed-up cattle. The supply at seven markets was the smallest since early August. Dressed beef channels began to clear up and prices on the hook were higher. Steers gained 50 to 75 cents, compared with the recent low spot, and cows and heifers nearly half that amount. A load sorted from cattle fed for show reached a new top for the year at Chicago of $13.85. Veal calves were quoted 75 cents to $1 higher.

The behavior of prices again shows that demand for beef is broad and indicates that overcrowding the market rather than diversion of consumers to other meats was responsible for the recent break. But the market remains in a vulnerable position and excessive runs will be punished. Furthermore, it will be a departure from past experience if the supply of short-feds is not heavy during January so that prices will do remarkably well to retain this level while the pressure is on.

Purchases of stocker and feeder cattle have fallen off about 25 per cent in the last six weeks, but are holding up quite as well as usual at this season. Prices are at practically the lowest point of the season. They are not apt to become cheaper with western range receipts dwindling rapidly.

Hog Market Shows Its Strength.

Hog prices recovered about 50 to 60 cents last week. Packers at all markets showed a keen appetite for hogs on the break and eastern shippers are beginning to buy more on middle-western markets. Outside demand is not showing up so strongly as at this time last year, but normally it is not prominent until after the first of the year.

Domestic demand for hog meats and lard has been stimulated by lower prices and exports, which have been running behind the corresponding period a year ago rather consistently, have reversed the comparison of late. October exports of hog products were 125,512,000 pounds, compared with 99,055,000 pounds last year. Clearances in the four weeks ending November 25, as given in trade reports, totalled 132,943,000 pounds, compared with 74,985,000 in the same period of 1921. More could be disposed of, but there is little left in the country to ship. If Chicago is an accurate criterion, but little product was stored in the first month of the new packing year as stocks of lard at that point on December 1 were smaller than a month ago and the smallest on that date in eight years, at least. Furthermore, stocks of hog meats at Chicago increased only 2,881,000 pounds during November. Slaughter of hogs at eleven markets appeared to be about 5 per cent above normal for that month.

New High in Lamb Market.

Lamb prices reached $15.50 at Chicago last week, a new high point for the season, as a result of the lightest run at seven markets since July. Eastern shippers were a prominent factor in forcing the advance. As the trend of receipts during December and January normally is downward, an advance to $16 or better will not occasion surprise. Demand for feeder lambs has fallen off about 35 per cent in the last six weeks, but receipts from the range are quite limited and buyers do not find it easy to supply their wants.

Heavy Wool Consumption Continues.

Consumption of wool during October by mills reporting to government agencies was 59,282,000 pounds, an increase of about 10 per cent over September. Allowing for non-reporting mills, total consumption would be 71,000,000 pounds or more. In the first ten months of 1922, approximately 644,000,000 pounds were used, compared with 524,000,000 pounds in the corresponding period of 1921, 526,000,000 pounds two years ago, 502,000,000 pounds three years ago, and 656,000,000 pounds in 1918, when war orders were a prominent factor.

Wheat Disappearing Rapidly.

The movement of wheat to primaries has not declined in a normal way in the last few weeks, probably due to relief in the car situation, so that receipts are slightly above the average for this time of year, but there is little accumulation as shipment to the seaboard has been quickened. The visible supply at terminals has increased lsightly in the last month, but it is the smallest at this season with one exception in twelve years. Primary receipts during the crop year up to November 25 totalled 240,930,000 bushels, compared with 255,910,000 last year. In the interval there has been an apparent distribution from primary markets of 223,512,000 bushels, compared with 215,230,000 bushels in the same period a year ago. Exports have been about 132,000,000 bushels, compared with 180,000,000 bushels last year, so that the increase in distribution has been entirely for domestic consumption. Our total surplus is estimated at about 220,000,000 bushels.

Demand for flour has been slower but is holding up surprisingly in view of the rate of output in the past five months and the approach of the inventory season. Some large sales were reported in the last few days and reduced operations on the part of a few big mills were said to be merely for the purpose of reducing premiums for cash wheat.

Foreign buying was extensive on the recent break, showing that a big latent demand exists, but that purchases will be made with caution. Germany was a heavy buyer in spite of her supposed financial straits, and reports were again current of a large German fund in this country for the purchase of foodstuffs. World shipments since the crop year started have not been up to the average expected in view of reduced crops in Europe, which suggests that a larger movement will be necessary later on, at least if foreign finances improve. Since clearances from Montreal have ceased, subtracting about 1,000,000 bushels daily from the quantity put afloat, and since the Argentine will be unable to increase shipments materially within a month, the demand for United States wheat should expand. Eastern congestion has been gradually relieved and about 45,000,000 bushels of Canadian wheat is strategically located to go by rail to United States ports during the winter, but the larger movement through such channels will not compensate for the complete stoppage at Montreal. Even after Southern Hemisphere wheat starts moving, clearances of 6,000,000 to 7,000,000 bushels weekly may be needed from North America to keep foreign wants supplied.

Argentine news has changed recently. Wet weather has delayed harvest and early threshing returns have been disappointing as to both yield and quantity. The Australian crop is estimated officially at 105,000,000 bushels, against 120,000,000 bushels last year. The apparent surplus of Argentina and Australia is about 185,000,000 bushels, against 210,000,000 bushels shipped this year. India is not putting much of her estimated surplus afloat. The latest official Canadian estimate is 391,000,000 bushels, or only 2,000,000 less than the record crop of 1915.

Cash Grain Markets.

The range of cash grain prices for the week ending December 2 was:

Kansas City—Wheat, No. 2 red $1.19@1.21; No. 3, $1.18@1.20; No. 2 hard, $1.12@1.19; No. 3, $1.11@1.19.

Corn—No. 2 mixed, 70¼@73½c; No. 2 yellow, 72½@73½c; No. 2 white, 70½@72c.

Oats—No. 3 white, 42@43¾c.

Barley—62@64c.

Omaha—Wheat, No. 2 hard, $1.09@1.13; No. 3, $1.08@1.12.

Corn—No. 2 mixed, 64½@66c; No. 2 yellow, 67@68½c; No. 3, 66@68c; No. 2 white, 65¼@66c.

Oats—No. 3 white, 40@41½c.

Rye—79@81c.

Barley—60@64c.

West Continues After Corn.

Feeding demand in the West wavers occasionally, but remains broad most of the time, with prices above a Chicago basis. Freight rates on corn to Texas and New Mexico have been reduced 50 per cent to make possible larger purchases by stockmen as needs remain large in spite of the heavy movement in the last three months. Eastern demand is dull, but broad enough to absorb receipts at primaries. Export sales are small, but the domestic needs are so large that a foreign outlet is unnecessary to take care of the supply. In many sections of the corn belt, local feeders are paying above terminal market prices and this demand will curtail the movement from surplus sections as well as check sales on breaks. Improvement in the car situation is facilitating the movement to consuming sections rather than to central markets. Total corn production for all countries for which reports are available is estimated at 3,464,798,000 bushels, compared with 3,801,969,000 bushels last year, a decline of 9 per cent.

Higher prices for corn are helping the oats market and export sales have increased recently. Total distribution from primary (Turn to Page 23)

Farm Business Outlook Offers Encouragement

ENCOURAGING developments were not wanting in the business and trade situation last week. Slight easing in the labor situation as a result of cessation of outdoor work was reported, but with a prospect of practically full employment throughout the winter. The car shortage on November 18 had declined about 12 per cent from the worst period, although car loadings remain the largest on record for this time of year. Mail-order houses reported that November sales were 25 to 35 per cent larger than in the same month last year. In spite of deplorable finances abroad and heavy purchases of grain and provisions, foreign exchanges held up well and sterling exchange reached the highest level since July, 1919. Advances predominated over declines in markets for farm products. Favorable legislation to provide farm credits began to look more probable.

Roger Babson, another of the business forecasters, has publicly expressed an optimistic view as to the outlook for 1923. Although the readjustment is not complete, Mr. Babson thinks that prospects for 1923 are bright for the following reasons:

Fundamental economic and social conditions have improved and furnish a basis for genuine prosperity.

Money conditions are sounder. Banks have strengthened their position, loans have been paid off and bank reserves are large enough to take care of much greater business expansion than has occurred without strain.

The agricultural situation from the standpoint of profits is the best it has been for three years.

Commodity conditions are favorable since inventories have been reduced, consumers are in position to buy, prices are more stable and fewer business failures are occurring.

The outstanding unfavorable conditions which must be corrected before complete prosperity can be attained as listed by Mr. Babson include surplus factory capacity (resulting from over-expansion during the war), the adverse labor situation and disturbing political and financial conditions abroad.

Farmers owning Liberty bonds will be interested in Babson's view that bonds generally will see higher levels in 1923 than in 1922.

Changing From Scrubs to Purebreds

HERD FROM ONE SOW AND NINETY-THREE PIGS FARROWED IN FOUR YEARS.

A. L. Mason.

ABOUT fourteen years ago I started in the hog business, but produced only scrubs. Realizing that this was poor business, I went to a hog sale April 11, 1918, where a number of registered Hampshire sows were offered. I was fortunate enough to get one of the best Hampshire sows that ever came in the neighborhood, with eight pigs, for $147. I took them home that evening and one was not acting just right and by morning it was dead. This was my first experience with thumps and I finally lost three. It was discouraging to lose all the sows in the litter. I put the sow on a rye pasture with no grain for a week and saved the five boar pigs, three of which were later used for the meat barrel and two sold on the market.

I bred the sow to a registered boar I had purchased for $40. I also had a few grade red sows that I bred for stock hogs. My grades were a failure that fall and that was the last grades I had on the place. My Hampshire sow brought me a litter of thirteen, all husky, fine pigs. This sow raised for me five litters in succession with thirteen to the litter, saving twelve each time. I kept this sow nearly four years and during that time she farrowed ninety-three pigs, saving eighty-one tlil weaning time.

I had as many as eighty head when on September 5 of last fall we had a flood and I lost forty-three head of purebred pigs, some 100-pound pigs. Eight sows farrowed the following week and they brought eighty-two pigs, but owing to the disturbance by the water, I only saved seven out of the eighty-two. I bought one other sow for $15, which died very suddenly- shortly after I bought her.

The boar mentioned was used three years, then shipped him to Denver, bringing me a net return of $108. I purchased another boar of the same firm and sold him recently for $50 after using him two years. I now have forty-five head of purebred Hampshires on my farm, most of which are nearly ready for market. All are grandchildren of the old sow. She contracted a lameness in the flood and when I sold her she weighed 400 pounds and brought $6 a hundred.

I cannot give a very accurate account of feeding expenses, as I use rye pasture and feed a lot of odds and ends. I feed a good deal of ground rye and barley and sometimes I soak it whole, while other times I soak ground grain, doing this for variety. Last fall I had some 200 bushels of corn that was hailed, but brought me a nice profit in hogs. It could not have been used otherwise. I bought 300 bushels of corn for $30, besides using some barley and also some rye that was damaged in my bin by the high waters. I market through our shipping association, sending them in usually at 175 to 225 pounds.

My hogs sell with the best from our town. The Hampshire is the best meat hog I have found, and also the best forager, and while they produce large litters they have few runts and fatten as quickly as any in the feed lot. I have never had a cross hog in this breed.

I have had my best luck with fall pigs farrowed in September and usually have my spring pigs come the latter part of March. I expect to sow alfalfa and sweet clover for permanent pasture and use rye, barley, cane and rape for catch pasture.

It was a hard pull at times the last two years to keep the herd coming, but it was a handy place to pick up a few dollars when needed.

What Farmers Think of Tractors

OWNERS USE THEIR OUTFITS FOR 40 PER CENT OF DRAW-BAR WORK.

THREE-FOURTHS of the farmers interviewed in a survey made by the United States Department of Agriculture in a winter-wheat section were of the opinion that their tractors would be profitable investments and 72 per cent stated that they would buy others when needed.

The principal advantages mentioned by tractor men were the ability to do more work in a given time, and the saving of horses in hot weather. Among the disadvantages, the first cost and depreciation and the running expenses were mentioned most frequently. The tractor was used as the primary source of power for field work by 59 per cent of the owners, while 41 per cent used the tractors as supplementary to horses. In 21 per cent of the cases, the tractor owners believed that the tractors had been responsible for some increased yield per acre.

Some 354 owners of tractors in northern Oklahoma, Kansas and southern Nebraska were interviewed in making this survey and a complete record was obtained of all work done with tractors and horses during the year. The reports indicate that the cost of power on tractor farms was somewhat greater than when horses were used for all the work. The survey shows the difference in cost of power and labor due to the use of tractors, the work done by them, and the cost an acre for different operations, both with horses and with tractors.

The farms investigated averaged about 500 acres in size, on which 352 acres of crops were grown in 1921, nearly three-fourths of the crop area being in wheat. The cost of using tractors for draw-bar work on these farms averaged $484 for the year, or $1.60 an hour. These farmers were keeping an average of 8.3 head of work stock in addition to their tractors, and the cost per farm of keeping the work stock for the year was $541. Thus the total annual cost of power for draw-bar work was $1,025. The tractors furnished the power for 40 per cent of the draw-bar work.

Variations in Cost of Power.

There were great variations in the practices and costs on individual farms and the results indicate that often the cost of using the tractors and keeping the work stock was excessive for the amount of work done. Many tractor owners have not determined exactly what work they can use their tractors for most profitably and what should be done with horses.

The average cost per crop acre was $3.37 a year for drawbar power for all the farms. The cost ranged from $2.21 as the average for the fourth of the farms with lowest costs, to $4.76 for the fourth of the farms with highest costs.

The tractors had been in use for twenty-three monhs on an average and the first cost had been $1,473, about one-third higher than the present price of tractors of the same size and type. During the year covered by the investigation, the cost of fuel and oil was also somewhat higher than at present. On account of these lower prices it is estimated that the present cost of operating tractors purchased at current prices would be something like 25 per cent below the 1921 costs on these farms.

Tractors Reduce Horses and Labor.

The effect of the addition of the tractor to the farm equipment was shown in changes recorded after the purchase of the tractor. On an average, these farms had been increased by fifty crop acres and there had been a reduction of 1.4 months in the amount of regular labor used. Three and one-third head of work stock in addition to those on hand at the time of investigations would have been necessary if the work had all been done with horses. The tractor owners considered that they needed in addition to their tractors an average of only 6.5 head, whereas they were actually keeping 8.3 head.

Effect on Power Costs.

There was a net increase of $206 per farm in the combined cost of power and labor due to the use of the tractor, after deducting the cost of keeping the work stock which had been displaced and the value of the family and hired labor saved.

Had all the surplus horses been sold, there would have been a further reduction of about $115 per farm in the cost of horse labor. On many of the farms there had been a reduction of feed for work stock due to the use of the tractor and if this had been taken into account a further saving of about $47 per farm would have been shown.

The analysis of the cost per acre of power and man labor for different operations when done with tractors and horses gave the following averages:

Plowing spring and fall with tractors, $1.99 an acre; plowing spring and fall with horses, $1.88 an acre; listing with tractors, $1.10 an acre; listing with horses, $1.03 an acre; disking (tandem disk) with tractors, 91c an acre; disking (tandem disk) with horses, $1.05 an acre; drilling with tractors, 68c an acre; drilling with horses, 52c an acre; drawing binder with tractors, 87c an acre; drawing binder with horses, 56c an acre.

Cost of Power on Horse Farms.

A group of 85 farms where tractors were not owned, but comparable in size to those where tractors were used, was surveyed in order to obtain a direct comparison between costs on farms where tractors are owned and costs on farms of similar size and type where tractors are not owned. There was an average of 10.5 head of work stock on these farms, of which 10.1 head were needed for the work. One horse was needed for each 33 crop acres, while the tractor owners were keeping one for each 42 acres, but needed, in addition to their tractors, only one for each 54 crop acres.

The cost per head of keeping the work stock was $66 a year where tractors were not owned, and $64 where they were owned. The horses worked 482 hours per head on the tractor farms and 624 hours on the other farms. The cost per farm of power for draw-bar work where tractors were not used was $701, as compared with $1,025 where both tractors and horses were used.

Arkansas Valley Cows Make Profit.

An average profit of $11.42 a cow above feed cost was made for the month of November by the 239 cows of the Arkansas Valley testing association. Twenty herds were tested for the month. The average cost of roughage to the cow was $3.72 and grain $2.46. The market value of milk for the month was $2.20 a hundred pounds and the cost in feed 78 cents a hundred pounds.

The herd of the Green Mountain Dairy had the highest production for the month and made an average profit a cow above cost of feed of $21.95. The cow with the highest record for the month was in the Harry Heath herd, her production being 63.3 pounds of butterfat. The next highest cow, owned by L. Wirt Markham, with a production of 61.6 pounds of butterfat, made the largest profit above feed cost, or $34.83. There were sixty-two cows in the quality class, nineteen more than last month.

There was an average increase of 23 pounds of milk to the cow for the month and 1.7 pounds of butterfat, says Max Grandy, tester for the Arkansas Valley association. He points out in his report that the value of the product increased 30 per cent a hundred pounds since the previous month. The average cost of feed increased 10 per cent a hundred pounds. The Helvetia Condensing Company announced a price of $2.45 a hundred pounds for 3.5 per cent milk for the month of December.

Kansas Judging Team Wins.

Of the seven agricultural college stock judging teams in the contest at the American Royal Stock Show the Kansas team ranked first. Second place went to Texas, third to Iowa, fourth to Nebraska, fifth to Missouri, sixth to Oklahoma and seventh to Arkansas. The student judges placed classes of fat barrows, Duroc Jersey gilts, Poland China gilts, fat Hereford steers, Angus heifers, Shorthorn heifers, Percheron stallions and fillies. W. I. Nelson, who has superintended the students' judging contests at the Kansas City show for more than twelve years, was in charge. W. H. Pew of Ravenna, Ohio, was the official judge. Colorado Agricultural College did not have a team in the contest.

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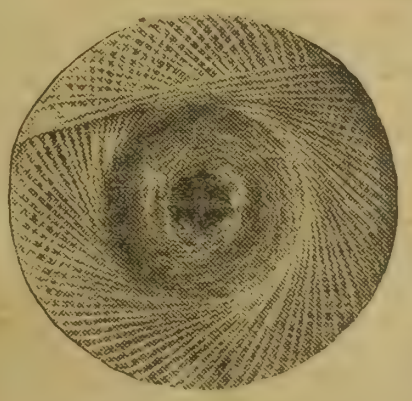

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Now is a good time to plan for next harvest's requirements. Consider every angle well. You have always known Harvester twine to be of unquestioned quality—now you have the added advantage of the "Big Ball" winding. Assure yourself a full supply of this good twine by making arrangements with the McCormick-Deering dealer next time you are in town, for delivery before harvest time.

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Tell Children Christmas Story.

We are approaching the Christmas season and before another issue of Western Farm Life reaches you, we will have celebrated this holiday of all holidays. Christmas is essentially the child's holiday. Do not fail to tell your children in language they will understand, of the birth of the Christ child so many years ago and what His coming meant to the world. Tell them of the Babe in the manger, the visit of the wise men with their gifts, of the shepherds watching their flocks on the hillside of Judea, to whom came the angels that night announcing the birth of the Child, and singing, "Peace on Earth, Good Will to Men." The children may not understand what it all means and neither do we who are older, fully understand, but even the child can grasp something of the beauty and significance of the Christmas story, and these early impressions will never be forgotten.

A Backward Look.

With this issue Western Farm Life passes another mile-post in its career of helpfulness to the agricultural development of Colorado and adjoining mountain states. Although this issue closes the twenty-fourth volume of Western Farm Life, it is as yet but an infant and can look forward to many years of helpfulness in growing up with the agriculture of this section. We have but made a beginning in the task of unlocking the resources of this great region through the tilling of the soil and converting into marketable form the wealth of our feed crops. The growth of this publication has been coincident with the establishment of the many farm homes throughout the section we serve and the transforming of this vast empire into its collection of progressive communities, with modern schools, churches, good roads and all the other things needful in developing a satisfactory mode of life.

It is with some feeling of satisfaction and pride that we contemplate the part Western Farm Life has taken in striving to make its influence contribute to the cause of a better agriculture and a more satisfying farm life in the region we serve. In editing Western Farm Life it has ever been the policy to make it cover every phase of agricultural activity and in the course of the year, to contribute something of value to the many different sections in which our subscribers are found. It is impossible for a farm paper editor to tell all his readers exactly how to farm, but he must have a general knowledge of the conditions under which they labor and must endeavor to bring to them in each issue helpful, authoritative material which they can take and adapt to the working out of their various problems. This we have tried to do through the issues of the volume just closed.

In common with the editors who have preceded [illegible] present editor feels that livestock produc[illegible] an essential feature of a permanent system of [illegible]culture and has endeavored to reflect that [illegible] conviction through our columns.

[illegible] interests of the home must be recognized as fundamental in every walk of life. It is not all of life to make a living, although perhaps many of us in this period of depression from which agriculture is so slowly recovering, feel that making a mere living is taxing us to the uttermost. We can, however, place too much emphasis on merely making a living and overlook the importance of learning how to live. Through the able assistance of our editor of the Rural Home Department, we have endeavored during the past year to furnish in each issue material which would be helpful in solving problems of home life both along material and ethical lines.

The editors regret their inability to meet personally all the readers of Western Farm Life. We feel that there is a certain handicap in this inability to establish personal contacts. We appreciate the hearty, cordial co-operation you have given us. We have received more kindly letters of commendation than of criticism, and both kinds are welcome. Without honest constructive criticism, we cannot tell how far we are missing the mark in our efforts to meet your needs.

With these few backward looks we turn to the future with the promise that we will strive to serve you to the best of our ability in the year ahead.

Breeders' Attitude on Tuberculosis.

Control and elimination of cattle tuberculosis is a problem which breeders must face and settle. It is one of the most serious questions with which we are confronted in developing our dairy business. If there were no tuberculin testing to demonstrate the freedom of cattle from disease, how easy it would be to sell stock. But the situation must be met as it exists. "The facts are that bovine tuberculosis does exist and is contagious," says H. V. Noyes, chairman of the extension and finance committee of the Holstein record association. Nobody who has seen a 'rotten herd' post-mortemed can doubt it.

"The world in general has accepted the tuberculin test as the only known means of diagnosis and even though the test is inaccurate and faulty, yet practically all buyers demand that cattle be subjected to it before they will accept them. Therefore, it follows that if you are in business for the purpose of selling cattle you must keep cattle that will stand the test, otherwise they are not salable.

"I have noticed that in all discussions between cattle men the argument turns upon the merits, or rather the weaknesses, of the tuberculin test. Such discussions are academically interesting but of no practical use.

"A merchant aims to keep goods that will sell, and a breeder of purebred cattle might just as well go out of business as to raise up a lot of animals that he can't sell.

"The tuberculin test may be as full of holes as a sieve, but it is the only diagnostic method known and it will continue to be used until something better is found. We should continue to hope that something better will be found and continue to study the question academically, but in the meantime as practical business men keep goods that we can sell."

It is up to Colorado breeders to get busy on this question. The Government Accredited Herd plan is one method of control which is actively in operation, but it calls for money to make the necessary tests. The Federal Government stands ready to do its part, but there must be co-operation on the part of the state. In a financial way that requirement has not as yet been adequately met. What are we going to ask of our representatives, soon to meet in the capitl city for the consideration of legislative matters that will be of benefit to our state?

Colorado Wins Club Honors.

We may well be proud of the club honors won by girls and boys of Colorado in the Chicago contests. As a result of their faithful work, the two Kit Carson county girls, with the state club leader, Miss Maud Sheridan, will have a free trip to Europe next summer. Both the girls, whose pictures appear on another page of this issue, have been active in club work for five or six years. Last year they represented Colorado in the interstate contest at the National Western Stock Show, putting on a millinery demonstration. But the girls are not alone in this matter of bringing club honors to the state. Ellis Johnson of Fort Morgan, state pig club champion, who won the Armour prize at the State Fair, consisting of a free trip to the International Livestock Exposition, while there was entered in a health contest along with 750 other club members and won second place. He demonstrated in this, that he was not only able to produce the perfect animal which won him his trip to Chicago, but knew how to make himself 100 per cent physically efficient, and thus live up to the four H's of club work—Head, Heart, Hand and Health.

Government to Tackle Farm Problems.

President Harding in his message to Congress recognizes the exceedingly critical situation in the agriculture in the country and in a more forceful and definite manner than he has heretofore shown urges credit legislation that will take care of the farmer's needs, and recommends the granting of enlarged powers to the Federal Farm Loan Board in order that ample livestock and farm production credits may be provided.

This evidence of more aggressive leadership on the part of the executive branch of our government in the interests of agricultural rehabilitation should bring some measure of encouragement to farmers. As the President said in his message, "The first distress of readjustment came to the farmer, and it will not be a readjustment fit to abide until he is relieved. The distress brought to the farmer does not affect him alone. Agricultural ill-fortune is a national misfortune."

Transportation problems are fundamental in their relation to the difficulties under which agriculture is laboring. Farmers know this and from every hand are coming demands for lower rates. The railroads may put up all sorts of arguments and present figures to prove that they cannot possibly continue in business if rates are lowered, but farmers know just as positively that transportation is at the bottom of their ills. In this also the President agrees in his message and pointedly states that transportation problems cannot be waived aside; that the demand for lowered costs on farm products and basic materials cannot be ignored. As a means of obtaining relief farmers are not in favor of government ownership as a remedy, but they are demanding that there be a working out of some sort of co-operative relationship involving all forms of transportation, water, railroad, and motor, which will bring about greater efficiency and economy in transportation. The strictly competitive system under which our great transportation systems have been developed has failed. The President suggests merging railroads into a few systems and a pooling of equipment as a remedial measure.

Another thing which farmers have been unable to understand is the wide spread between the prices which they are receiving for their products and the prices which consumers are having to pay. Whatever the cause or combination of causes for this high cost of getting their products to the consumer, producers feel sure that it is a factor in keeping down the price at the production end. Here also the President has seen fit to make recommendation and urges that Congress make a systematic study of the causes for this wide spread between production receipts and ultimate consumer costs.

Take it in all, irrespective of party considerations, the changed attitude of the administration toward agriculture as evidenced in the President's aggressive recommendations give promise of something definite through legislative action. The narrowing down of the party majority acts as a spur to the administration and it is to be hoped that the President will become a real driving force in getting some of the things done which he recommends.

Are We Like Sheep?

During a slump in the cattle market some weeks ago when prices on cattle were at a low mark many a load of good cattle went begging for a buyer. Commission men were wireing and telephoning customers in the various sections who usually take out cattle to place their orders but received little response. It might have seemed that all these men had definitely decided that they were not going to handle cattle this year. But such was not the case, for no sooner had the market taken an upward turn than the same men began to send in their orders. In so far as feed, finances and ability were concerned, they were in the same position as when cattle were in a slump with nobody buying. With the upward turn, and cattle bringing half a dollar a hundred more, a buyer in the Denver yards found that he had all kinds of orders, many of which he could not fill because the cattle were not available. Why should men who have feed and expect to sell it through cattle adopt this sort of policy in their buying? It is a practice too often followed by farmers and livestock men in shaping up their production plans. Always eager to do what everyone else seems to be doing when the safer plan is to do just the opposite. Trying to get in on the crest of the wave in any line of production more often results in failure than success. In livestock it usually means that top prices are paid in stocking up and by the time animals are ready for market the pendulum has swung the other way and prices are on the decline.

From the Nation's Capital

RURAL CREDIT LEGISLATION A BIG ISSUE IN NEW CONGRESS.

E. E. Reynolds.

THE administration's answer to the demand of farmers for relief from the present depressed condition of agriculture is a rural credit program, embodied in a bill introduced in the House of Representatives by Congressman McFadden of Pennsylvania and in the Senate by Senator Arthur Capper of Kansas, which is designed to provide credit facilities for agricultural and livestock financing.

It proposes to increase the maximum loan limit of Federal Farm Land banks from $10,000 to $25,000. It provides that agricultural and livestock credit associations may be formed in communities, similar to the farm loan associations now in existence, to deal with loans on farm products and livestock.

The Federal Farm Loan act is amended to provide for the re-discounting of agricultural production and marketing paper, and adds two members to the Federal Farm Loan Board.

A division is created in every Federal Land Bank to deal specifically with production and marketing credits, supplying credit to the farmer not exceeding nine months on his crops, and three years to the livestock producer, secured by first lien on maturing and breeding livestock and dairy herds.

This proposed legislation has the support of the administration and a large group of senators, and has the backing of a large number of western livestock raisers. It is opposed by representatives of several of the large farm organizations who do not want a rural personal credit system tied up with the Federal Farm Loan Board and Federal Reserve system, and a similar plan proposed some time ago met the opposition of the Federal Farm Loan Board on the grounds that it would require a different type of men to handle short-time loans than those now on the Farm Loan Board or in the Federal Land banks.

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Strong Farm Credit Bill Backed by Farm Bureau Federation.—A farm credit bill introduced in the House by Congressman Strong of Kansas has the backing of the American Farm Bureau Federation and is favored by a large number of members of the agricultural bloc.

The Strong bill presents a plan for the permanent organization of the Federal Land Banks, as follows: The Federal Farm Loan Board shall appoint three district directors, the National Farm Loan Associations shall elect three such directors, and the six directors shall select the seventh, who shall be chairman of the board. This seventh director must be a farmer actually engaged at the time of his appointment in direct farming operations. No director appointed by the Federal Farm Board shall be engaged in banking or connected with any other farm loan institution. As the Federal Farm Loan associations select three directors and the seventh must be a real farmer, the control of the Federal Land banks is practically in their hands.

Another provisions of the Strong bill increases the amount which individuals may borrow from co-operative Federal Land banks. It permits the voluntary liquidation of associations, allows the appointment of agents where co-operative farm loan associations do not exist, and places the expense of the Federal Farm Loan system upon both the Federal Land banks and the Joint Stock Land banks. It also creates a central land bank for the purpose of marketing the bonds of the Federal Farm Loan system.

Another amendment would enable the Federal Farm Land banks to liquidate debts which have been incurred on other than real estate upon which the loans are to be made. They may take care of the farmer's debt no matter for what purpose they were created, providing the mortgage represents the land and the buildings thereon. Under this bill, the Farm Bureau men point out, if a farmer owes money on a tractor, he may place a mortgage on his land with the Federal Farm Loan Association and pay off the debt on the machine. Likewise a farmer may borrow to educate his children. Under the present law this is not permissible.

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Farm Organizations Demand Marketing System.—The Norris-Sinclair bill, upon which hearings have been held before the Senate Agriculture Committee, is favored by farm organization representatives from the West who insist that the extension of credit facilities will not help the farmers already burdened with debt, unless a system of marketing is created which will insure better prices for farm products.

Under the Norris bill the secretary of agriculture and two additional directors to be appointed by the President are created a corporation under the title of "The Farmers' and Consumers' Financing Corporation."

The capital stock of the corporation shall be $100,000,000, all of which is to be subscribed by the Federal government. The two appointed directors shall receive annual salaries of $12,000, and the principal office of the corporation is to be located in Washington.

This corporation is empowered to build, buy, lease, and operate elevators and storage warehouses; to buy agricultural products from any person or co-operative organization of producers within the United States, and to sell such products to any person or co-operative organization of consumers, or to any government without the United States; to act as agent of any person or co-operative organization producing or dealing in agricultural products in the sale of such products; and to make advances for the purpose of assisting any person or co-operative association in financing the sale, or exportation and sale of such agricultural products.

The objects claimed for this bill is that it will provide a market for the sale of agricultural products, eliminate commissions and profits and thereby increase the price which the producer receives and decrease the price which the consumer pays. It seeks to stabilize the market without resorting to the price-fixing features contained in the bill recently introduced by Senator Ladd of North Dakota.

Present indications are that the Capper-McFadden rural credit bill, with the prestige of an administration measure and strongly backed in Congress will be enacted into law, and will probably be the last word in rural credit legislation so far as the present administration is concerned.

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Merchant Marine Bill Having Hard Fight.—The ship subsidy bill has passed the House, but will have hard sledding in the Senate, where powerful opposition is developing. All the big farm organizations except possibly the American Farm Bureau Federation are opposed to the proposed measure.

The National Farmers' Union at its recent annual session declared its opposition to ship subsidy. The National Grange at its annual meeting in Wichita, Kan., declared its unalterable opposition to all ship subsidy legislation and to every form of direct subsidies to private enterprises, and it pledged the full strength of the organization toward the defeat of whatever form of ship subsidy legislation has been or may be introduced in Congress.

While standing on the broad ground of favoring a move expanding our commerce, as an emergency measure, President James R. Howard of the American Farm Bureau Federation, objects to tax exemption features and believes that the proposal to pay a subsidy up to the point that the ships earn 10 per cent annual dividends is too high. He is convinced that a limit of 6 per cent more nearly meets the situation.

Mr. Howard also objects to the government loaning money to ship companies at 2 per cent, saying that shipping companies should obtain moneys on the same basis as other undertakings.

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General Agricultural Situation Slightly Improved.—A note of optimism is carried in the reports on the agricultural situation coming to the Federal Department of Agriculture from the various states. Prices have risen slightly and the general price level is upward. The purchasing power of farm products is a little higher than a few months ago.

In the South things look considerably better, and in the West there are indications of improvement. Rain and snow have improved range conditions. Sheepmen are feeling fairly good at the sheep, lamb and wool prices. The outlook for the sheep industry is favorable.

Eastern farmers are in bad shape. Dr. C. E. Ladd, extension specialist in farm management in New York State, writes the Bureau of Agricultural Economics that New York farmers are suffering big losses this year and are discouraged. Many tons of cabbage will not be sold, many thousands of bushels of apples are rotting on the ground in the orchards, and buyers are making no attempt to buy hay in some sections.

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Taxation a Vital Question to Farmer.—The increase in taxation is a source of much discussion and comment in Washington. Secretary of Agriculture Wallace calls attention to this matter in his annual report, as follows: "Taxes are said to have become a galling burden on the farmer. They have greatly increased while the profits of farming have diminished. An investigation of a large number of farms in 1913 showed taxes were 9.8 per cent of the farmer's income. Last year on the same farms they amounted to nearly one-third of the income."

Increasing Moisture Capacity of Soil.

A soil containing an abundance of decaying vegetation and organic matter, such as is supplied by turning under green manure crops and stable manure has a greater moisture holding capacity than soil lacking in organic matter. This function of decaying vegetation in the soil is in addition to its adding plant food and improving the physical texture. In farming under limited rainfall this is a point well worthy of careful consideration. Carefully conducted experiments have shown that while 100 pounds of sand can hold only twenty-five pounds of water, and 100 pounds of clay fifty pounds, the same weight of decaying organic matter will hold 190 pounds of water.

Clay soil containing organic matter is more friable than similar soil without organic matter. When the organic matter is entirely removed the clay remains compact during freezing and thawing. When the organic matter is returned the soil crumbles after freezing, just as the original soil.

Not only do the higher plants grow better in a soil rich in organic matter, but the activities of the soil bacteria are largely dependent on the supply of decaying vegetable matter. These bacteria need food and air. Their food is the dead vegetable matter, which they break down and make available to the higher plants. Most beneficial bacteria use air, and this they find more abundantly in a soil supplied with organic matter than in stiff clays poor in it. In sandy soils there is air enough, but the addition of humus helps to hold moisture and so benefits the bacteria as well as the higher plants.

Public Opinion on Co-Operative Marketing.

Articles in the October issue of the World's Work and the October 7 issue of the Literary Digest clearly show the trend of public opinion on co-operative marketing of farm products. The American Farm Bureau Federation and many of the State Farm Bureaus have advocated and urged co-operative marketing as a necessity ever since their organization, and by so doing brought out severe criticism from many sources not in accord with the interests of the farmer.

By persistently advocating and successfully practicing co-operative marketing the Farm Bureau has changed public opinion and the opinion of many farmers. The National Agricultural Conference and the Joint Commission of Agricultural Inquiry in both of which the Farm Bureau took a prominent part, are responsible in a great measure for this change and are a direct result of the activities of the Farm Bureau and other farmers' organizations.

The reports of these national gatherings and especially that of the Joint Commission on Marketing and Distribution, have served to crystallize public opinion, due to the fact that they are results of the most exhaustive and authoritative studies of the farming business that have ever been made. Leading publications are now featuring this as a part of their public service.

It is not out of place at this time to ask the farmer what his responsibility is in this connection.

Summer Visitors Increase.

Almost a million and a half visitors enjoyed the beauties of Nature's playgrounds the past season in Colorado. They motored across the high passes and through the valleys enjoying the magnificent scenery of high mountains, deep canons, the wooded mountain slopes and immense fields of wild flowers. Some climbed peaks or strolled through the pine and spruce forests or explored glaciers, while others were content to rest and enjoy the pure air, beautiful sunshine and the singing of birds.

One million one hundred and seventy-three thousand used automobiles, while 277,000 traveled by train or on foot. Some of them stayed only a few hours, while others camped out or lived in cottages all summer, but the whole time spent amounted to a total of 2,557,000 days spent in the forests.

These visitors built 220,661 camp fires and it speaks well for their caution that only forty-three fires were reported for the season as having started from unextinguished camp fires, but there were forty-one fires as a result of smoking in the forests.

What Is Meant by Hedging.

Hedging is a form of insurance against loss of money through fluctuations in grain prices. A country grain dealer who has bought cash grain which he cannot dispose of immediately because of time consumed in transit may contract to sell an equal amount for future delivery. The actual grain may be delivered on this contract but usually the grain goes to some other buyer and the dealer evens up his hedging contract by buying an equal amount for future delivery. If the price of cash grain goes down and that for future delivery declines an equal amount, the loss on the farmer will be offset by the gain on the latter. The dealer is thus enabled to insure himself a distributor's profit and eliminate the risk of ownership.

Likewise, a flour mill operator may contract to deliver flour at a future date at a price based on the present price of wheat; unless the miller has the wheat to produce the flour he may hedge his flour sale by the purchase of wheat for future delivery. If the wheat which he must buy as it arrives from day to day advances in price, the loss from making it into flour at the price at which the flour was sold is offset by the gain on the contract for future delivery. Thus the miller makes sure of a miller's profit and removes the risk and speculation from his operation.

In actual practice, however, hedging is usually only about 60 per cent of perfect insurance because of the fact that cash grain and the futures do not fluctuate absolutely together. Many grain handlers do not use it. It is more commonly employed by millers, terminal warehousemen, shippers, exporters and grain-using industries than by country elevators. Also old-line elevators use it more than co-operatives.

Advocates of speculative transactions in grain for future delivery on Boards of Trade justify it chiefly on the grounds that it makes hedging possible and reduces the margin required in handling grain. Opponents of such trading claim that the volume of these speculative trades is many times larger than is required to take care of legitimate hedging. Also that this machinery permits sentiment to sway prices and thus increases the fluctuations which make hedging desirable. In brief, if there were no speculative trading, hedging would be practically unnecessary or conditions would be no worse than the 60 per cent insurance which hedging now affords.

Time to Git 'Er Out.

When the frost is on the pumpkin,
And the fodder's in the shock,
Then dad redeems his overcoat
And puts the car in hock.

Bulk is an important factor in the digestibility of a dairy ration. Heavy feeds, such as corn meal, cotton-seed meal and oil meal, should be mixed with bulky feeds, such as bran and ground oats.

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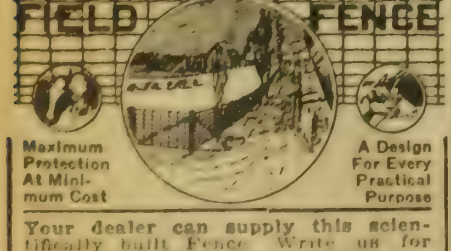

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Tangled Trails.

(Continued from Page 5.)

The animal flung itself skyward and came down on the boot of a puncher savagely. The man gave an involuntary howl of pain, but he clung to the rope snubbed round the wicked head.

The gunny sack was pushed and pulled over the eyes. Wild Fire subsided, trembling, while bridle was adjusted and saddle slipped on. The girl attended to the cinching herself. If the saddle turned it might cost her life, and she preferred to take no unnecessary chances.

She was dressed in green satin riding clothes. A beaded bolero jacket fitted over a white silk blouse. Her boots were of buckskin, silver-spurred. With her hat on, at a distance, one might have taken her for a slim, beautiful boy.

Wild Rose swung to the saddle and adjusted her feet in the stirrups. The gunny sack was whipped from the horse's head. There was a wild scuffle of escaping wranglers.

For a moment Wild Fire stood quivering. The girl's hat swept through the air in front of its eyes. The horse woke to galvanized action. The back humped. It shot into the air with a writhing twist of the body. All four feet struck the ground together, straight and stiff as fence posts.

The girl's head jerked forward as though it were on a hinge. The outlaw went sunfishing, its forefeet almost straight up. She was still in the saddle when it came to all fours again. A series of jarring bucks, each ending with the force of a pile-driver as Wild Fire's hoofs struck earth, varied the program. The rider came down limp, half in the saddle, half out, righting herself as the horse settled for the next leap. But not once did her hands reach for the pommel of the saddle to steady her.

Pitching and bucking, the animal humped forward to the fence.

"Look out!" a judge yelled.

It was too late. The rider could not deflect her mount. Into the fence went Wild Fire blindly and furiously. The girl threw up her leg to keep it from being jammed. Up went the broncho again before Wild Rose could find the stirrup. She knew she was gone, felt herself shooting forward. She struck the ground close to the horse's hoofs. Wild Fire lunged at her. A bolt of pain like a red-hot iron seared through her.

Through the air a rope whined. It settled over the head of the outlaw and instanty was jerked tight. Wild Fire, coming down hard for a second lunge at the green crumpled heap underfoot, was dragged sharply sideways. Another lariat snaked forward and fell true.

'Here, Cole!" The first roper thrust the taut line into the hands of a puncher who had run forward. He himself dived for the still girl beneath the hoofs of the rearing horse. Catching her by the arms, he dragged her out of danger. She was unconscious.

The cowboy picked her up and carried her to the waiting ambulance. The closed eyes flickered open. A puzzled little frown rested in them.

"What's up, Kirby?" asked Wild Rose.

"You had a spill."

"Took the dust, did I?" He sensed the disappointment in her voice.

"You rode fine. He jammed you into the fence," explained the young man.

The doctor examined her. The right arm hung limp.

"Broken, I'm afraid," he said.

"Ever see such luck?" the girl complained to Lane.

"Probably they won't let me ride in the wild-horse race now."

"No chance, young lady," the doctor said promptly. "I'm going to take you right to the hospital."

"I might get back in time," she said hopefully.

"You might, but you won't."

"Oh, well," she sighed. "If you're going to act like that."

The cowboy helped her into the ambulance and found himself a seat.

"Where do you think you're going?" she asked with a smile a bit twisted by pain.

"I reckon I'll go as far as the hospital with you."

"I reckon you won't. What do you think I am—a nice little parlor girl who has to be petted when she gets hurt? You're on to ride inside of fifteen minutes—and you know it."

"Oh, well! I'm lookin' for an alibi so as not to be beaten. That Cole Sanborn is sure a straight-up rider."

"So's that Kirby Lane. You needn't think I'm going to let you beat yourself out of the championship. Not so anyone could notice it. Hop out, sir."

He rose, smiling ruefully "You certainly are one bossy kid."

"I'd say you need bossing when you start to act so foolish," she retorted, flushing.

"See you later," he called to her by way of goodbye.

As the ambulance drove away she waved cheerfully at him a gauntleted hand.

The cowpuncher turned back to the arena. The megaphone man was announcing that the contest for the world's rough-riding championship would now be resumed.

CHAPTER III.

For the Championship of the World.

The less expert riders had been weeded out in the past two days. Only the champions of their respective sections were still in the running. One after another these lean, brown men, chap-clad and bow-legged, came forward dragging their saddles and clamped themselves to the backs of hurricane outlaws which pitched, bucked, crashed into fences, and toppled over backward in their frenzied efforts to dislodge the human clothespins fastened to them.

The broncho busters endured the usual luck of the day. Two were thrown and picked themselves out of the dust, chagrined and damaged, but still grinning. One drew a tame horse not to be driven into resistance either by fanning or scratching. Most of the riders emerged from the ordeal victorious. Meanwhile the spectators in the big grand stand, packed close as small apples in a box, watched every rider and snatched at its thrills just as such crowds have done from the time of Caligula.

Kirby Lane, from his seat on the fence among a group of cowpunchers, watched each rider no less closely. It chanced that he came last on the program for the day. When Cole Sanborn was in the saddle he made an audible comment.

"I'm lookin' at the next champion of the world," he announced.

"Not onless you've got a lookin'-glass with you, old alkali," a small berry-brown youth in yellow-wool chaps retorted.

Sanborn was astride a noted outlaw known as Jazz. The horse was a sorrel, and it knew all the tricks of its kind. It went sunfishing, tried weaving and fence-rowing, at last toppled over backward after a frantic leap upward. The rider, long-bodied and lithe, rode like a centaur. Except for the moment when he stepped out of the saddle as the outlaw fell on its back, he stuck to his seat as though he were glued to it.

"He's a right limber young fellow, an' he sure can ride. I'll say that," admitted one old cattleman.

"They don't grow no better busters," another man spoke up. He was a neighbor of Sanborn and had his local pride. "From where I come from we'll put our last nickel on Cole, you betcha. He's top hand with a rope too."

"Hmp! Kirby here can make him look like thirty cents, top of a bronc or with a lariat either one," the yellow-chapped vaquero flung out bluntly.

Lane looked at his champion, a trifle annoyed. 'What's the use o' talkin' foolishness, Kent? I never saw the day I had anything on Cole."

"Beat him at Pendleton, didn't you?"

"Luck. I drew the best horses." To Sanborn, who had finished his job and was straddling wide-legged toward the group, Kirby threw up a hand of greeting. "Good work, old-timer. You're sure hell-amile on a bronc."

"Kirby Lane on Wild Fire," shouted the announcer.

Lane slid from the fence and reached for his saddle.

As he lounged forward, moving with indolent grace, one might have guessed him a Southerner. He was lean-loined and broad-shouldered. The long, flowing muscles rippled under his skin when he moved like those of a panther. From beneath the band of his pinched-in hat crisp, reddish hair escaped.

Wild Fire was off the instant his feet found the stirrups. Again the outlaw went through its bag of tricks and its straight bucking. The man in the saddle gave to its every motion lightly and easily. He rode with such grace that he seemed almost a part of the horse. His reactions appeared to anticipate the impulses of the screaming fiend which he was astride. When Wild Fire jolted him with humpbacked jarring bucks his spine took the shock limply to neutralize the effect. When it leaped heavenward he waved his hat joyously and rode the stirrups. From first to last he was master of the situation, and the outlaw, though still fighting savagely, knew the battle was lost.

The broncho had one trump card left, a trick that had unseated many a stubborn rider. It plunged sideways at the fence of the enclosure and crashed through it. Kirby's nerves shrieked with pain, and for a moment everything went black before him. His leg had been jammed against the upper plank. But when the haze cleared he was still in the saddle.

The outlaw gave up. It trotted tamely back to the grand stand through the shredded fragments of pine in the splintered fence, and the grand stand rose to its feet with a shout of applause for the rider.

Kirby slipped from the saddle and limped back to his fellows on the fence. Already the crowd was pouring out from every exit of the stand. A thousand cars of fifty different makes were snorting impatiently to get out of the jam as soon as possible. For Cheyenne was full, full to overflowing. The town roared with a high tide of jocund life. From all over Colorado, Wyoming, Montana, and New Mexico hardbitten, sunburned youths in high-heeled boots and gaudy attire had gathered for the Frontier Day celebration. Hundreds of cars had poured up from Denver. Trains had disgorged thousands of tourists come to see the festival. Many people would sleep out in automobiles and on the prairie. The late comers at restaurants and hotels would wait long and take second best.

A big cattleman beckoned to Lane. "Place in my car, son. Run you back to town."

One of the judges sat in the tonneau beside the rough rider.

"How's the leg? Hurt much?"

"Not much. I'm noticin' it some," Kirby answered with a smile.

"You'll have to ride tomorrow. It's you and Sanborn for the finals. We haven't quite made up our minds."

The cattleman was an expert driver. He wound in and out among the other cars speeding over the prairie, struck the road before the great majority of the automobiles had reached there, and was in town with the vanguard.

After dinner the rough rider asked the clerk at her hotel if there was any mail for Miss Rose McLean. Three letters were handed him. He put them in his pocket and set out for the hospital.

He found Miss Rose reclining in a hospital chair, in a frame of mind highly indignant. "That doctor talks as though he's going to keep me here a week. Well, he's got another guess coming. I'll not stay," she exploded to her visitor.

"Now, looky here, you better do as the doc says. He knows best. What's a week in your young life?" Kirby suggested.

"A week's a week, and I don't intend to stay. Why did you limp when you came in? Get hurt?"

"Not really hurt. Jammed my leg against a fence. I drew Wild Fire."

"Did you win the championship?" the girl asked eagerly.

"No. Finals tomorrow. Sanborn an' me. How's the arm? Bone broken?"

"Yes. Oh, it aches some. Be all right soon."

He drew her letters from his pocket. "Stopped to get your mail at the hotel. Thought you'd like to see it."

Wild Rose looked the envelopes over and tore one open.

"From my little sister Esther," she explained. 'Mind if I read it? I'm some worried about her. She's been writing kinda funny lately."

As she read, the color ebbed from her face. When she had finished reading the letter Kirby spoke gently.

"Bad news, pardner?"

She nodded, choking. Her eyes, frank and direct, met those of her friend without evasion. It was a heritage of her life in the open that in her relations with men she showed a boylike unconcern of sex.

"Esther's in trouble. She—she—" Rose caught her breath in a stress of emotion.

"If there's anything I can do—"

The girl flung aside the rug that covered her and rose from the chair. She began to pace up and down the room. Presently her thoughts overflowed in words.

"She doesn't say what it is, but—I know her. She's crazy with fear—or heartache—or something." Wild Rose was always quick-tempered, a passionate defender of children and all weak creatures. Now Lane knew that the hot blood was rushing stormily to her heart. Her little sister was in danger, the only near relative she had. She would fight for her as a cougar would for its young. "By God, if it's a man—if he's done her wrong—I'll shoot him down like a gray wolf. I'll show him how safe it is to—to—"

She broke down again, clamping tight her small strong teeth to bite back a sob.

He spoke very gently. "Does she say—?"

His sentence hung suspended in air, but the young woman understood the significance.

"No. The letter's just a—a wail of despair. She talks of suicide. Kirby, I've got to get to Denver on the next train. Find out when it leaves. And I'll send a telegram to her tonight telling her I'll fix it. I will too."

"Sure. That's the way to talk. Be reasonable an' everything'll work out fine. Write your wire an' I'll take it right to the office. Soon as I've got the train schedule I'll come back."

For a moment her left hand fell in his. He looked down at a small, firm, sunbrowned fist. That hand was, as Browning has written, a woman in itself, but it was a woman competent, unafraid, trained hard as nails. She would go through with whatever she set out to do.

As his eyes rested on the fingers there came to him a swift, unreasoning prescience of impending tragedy. To what dark destiny was she moving?

CHAPTER IV.

Not Always Two to Make a Quarrel.

Kirby put Wild Rose on the morning train for Denver. She had escaped from the doctor by sheer force of will. The night had been a wretched one, almost sleepless, and she knew that her fever would rise in the afternoon. But that could not be helped. She had more important business than her health to attend to just now.

Ordinarily Rose bloomed with vitality, but this morning she looked tired and worn. In her eyes there was a hard brilliancy Kirby did not like to see. He knew from of old the fire that could blaze in her heart, the insurgent impulses that could sweep her into recklessness. What would she do if the worst she feared turned out to be true?

"Good luck," she called through the open window as the train pulled out. "Beat Cole, Kirby."

"Good luck to you," he answered. "Write me soon as you find out how things are."

But as he walked from the station his heart misgave him. Why had he let her go alone, knowing as he did how swift she blazed to passion when wrong was done those she loved? It was easy enough to say that she had refused to let him go with her, though he had several times offered. The fact remained that she might need a friend at hand, might need him the worst way.

All through breakfast he was ridden by the fear of trouble on her horizon. Comrades stopped to slap him on the back and wish him good luck in the finals, and though he made the proper answers it was with the surface of a mind almost wholly preoccupied with another matter.

While he was rising from the table he made a decision in the flash of an eye. He would join Rose in Denver at once. Already dozens of cars were taking the road. There would be a vacant place in some one of them.

He found a party just setting out for Denver and easily made arrangements to take the unfilled seat in the tonneau.

By the middle of the afternoon he was at a boarding house on Cherokee street inquiring for Miss Rose McLean. She was out, and the landlady did not know when she would be back. Probably after her sister got home from work.

Lane wandered down to Curtis street, sat through part of a movie, then restlessly took his way up Seventeenth. He had an uncle and two cousins living in Denver. With the uncle he was on bad terms, and with his cousins on no terms at all. It had been ten years since he had seen either James Cunningham, Jr., or his brother Jack. Why not call on them and renew acquaintance?

He went into a drug store and looked the name up in a telephone book. His cousin James had an office in the Equitable building. He hung the book up on the hook and turned to go. As he did so he came face to face with Rose McLean.

"You—here!" she cried.

"Yes, I—I had business in Denver," he explained.

"Like fun you had! You came because—" She stopped abruptly, struck by another phase of the situation. "Did you leave Cheyenne without riding today?"

"I didn't want to ride. I'm fed up on ridin'."

"You threw away the championship and a thousand-dollar prize to—to—"

"You're forgettin' Cole Sanborn," he laughed. "No, honest, I came on business. But since I'm here—say, Rose, where can we have a talk? Let's go up to the mezzanine gallery at the Albany. It's right next door."

He took her into the Albany Hotel. They stepped out of the elevator at the second floor and he found a settee in a

(Turn to Page 13.)

American Royal Holds First Show in New Home

Colorado Exhibitors Win Many Honors and Valuable Prizes

M. N. Beeler.

BACK in 1899, Colorado helped to make the first American Royal Livestock Show in Kansas City. At that time, Charles N. Whitman, Denver, exhibited seventeen head of Herefords, the only breed shown Since then Colorado has been represented in practically every exposition that has been held. This year there were five breeders of Herefords from Colorado, two of Shorthorns and the Colorado Agricultural College showed fat barrows. A new exposition building, the best in the United States, marked the twenty-fourth annual American Royal and gave the show new life.

For nearly a quarter of a century breeders of the West and Southwest have waited the building of a home for this show which would be representative of the livestock interests of the territory. The wait has been long, but it has ended at last and visitors who journeyed to Kansas City, November 18 to 25, were gratified with the Royal's new home.

Eight Colorado Herds Shown.

Colorado herds which were represented at the exposition this year were those of G. W. Baker, Littleton; W. N. W. Blayney, Denver; Ken Caryl Ranch, Littleton, in the Hereford division. Shorthorn breeders were The Allen Cattle Company, Colorado Springs, and The Maxwell-Miller Cattle Company, Littleton. Colorado Agricultural College showed fat barrows in the Duroc and Poland China divisions.

Other Western and Southwestern states were represented to a lesser extent in different sections of the show. Colorado exhibitors met successfully the best herds from North, East and South. The Hereford show was considered by breeders the strongest show that has ever been held in the country. There have been larger shows at both the American Royal and at the International in Chicago, but it is doubtful if so much Whiteface quality in such great numbers of Herefords have ever been assembled at one livestock show. Two or three years ago there was a large Hereford exhibit in Kansas City, but there were considerable numbers of tag-ends in that offering, while in this show quality was evident from one end to the other.

The two Colorado breeders who exhibited Shorthorns got in the money in every class in which they showed, except junior yearling and senior heifer calves. Maxwell-Miller Cattle Co. showed the first prize aged cow with calf at side in Cloverleaf Lovely 2d, against four other contenders. First place in the graded herd of five animals also went to this firm.

Coveted Hereford Award to Colorado.

Money went to Colorado entries in practically every class of the Hereford division. In many respects the most valued prize of the show, first in get of sire, went to Baker on a group sired by Mischief Mixer.

John Schafer of Chicago, owner of the Ken Caryl Ranch, was an interested spectator at the ring-side. He saw Ken Caryl entries carry away thirteen ribbons, including two firsts, two seconds and a third. France Lassie, a grand champion at many of the state fairs this fall, brought first honors to Ken Caryl Ranch in the class of aged cows, and Lady Domino 8th, another Ken Caryl entry, won the blue in a class of twenty-five senior yearling heifers.

France Lassie had one of her few defeats this season in showing with the other first prize entries for the senior championship. J. N. Camden, Versailles, Ky., won this place with his two-year-old Lady Woodford. This heifer was later made grand champion female, defeating the junior champion, Belle Blanchard 112th, shown by Jesse Engle & Sons, Sheridan, Mo. Camden also won the senior and grand championship on the bull Hartland Woodford, and another Kentuckian, Col. E. H. Taylor, Jr., Frankfort, took the junior championship on Woodford 130th.

Two-Million Dollar Show.

The greatest cattle show of the Middle West was staged Tuesday night when competitors for the Kansas City Stockyards trophy for the best ten head of each of the beef breeds led out their entries. There were twenty-four entries of ten head each. Herefords had fourteen of these, or 140 head. It was estimated that the value of these Herefords was at least a million and a half dollars. The other entries of Shorthorns, Angus and Galloways must have brought the total to nearly two millions. First in the Hereford section was won by Col. Taylor on ten animals sired by Woodford. Anoka Farms, Waukesha, Wis., took first in the Shorthorns; S. C. Fullerton & Son, Miami, Okla., took first in the Angus, and H. Croft, Anthony, Kan., first in the Galloways.

Other championships of the show were:

Shorthorns—Senior and grand champion bull, Eli Risenberger & Son, Tiffin, Ohio, on Maple Rose Pride; junior champion bull and female, Anoka Farms, on Anoka Guardian and Emmalene Anoka; senior and grand champion female, A. C. Shallenberger, Alma, Neb., on Supremacy.

Aberdeen Angus—Senior champion bull and junior grand champion bull, T. J. Leahy, Williamsburg, Iowa, on Black Star Atlas, and Elberon 2d; senior and grand champion cow and junior champion, R. W. Frank, Renwick, Iowa, on Erica Enlate and Erra.

Galloways—Senior and grand champion bull, senior and grand champion cow, H. Croft, Anthony, Kan., on Haida's Optimist and Cora Cola; junior champion bull and junior champion female, Hiersche Brothers, Geary, Okla., on Viceroy Stamp and May of Geary.

In Percherons all championships of the breed went to J. O. Singmaster & Sons, Keota, Ill. In Belgians all awards went to Kansas State Agricultural College without competition. In the Clydesdales, senior and grand champion stallion and junior and grand champion female, was won by South Brothers, Orion, Ill., on Royal Prince, and Pearl; the junior champion stallion award and senior champion mare went to A. G. Soderberg, Osco, Ill., on Osco Champion and Lovely Lass.

In the Poland Chinas, senior and grand champion boar and junior champion sow, went to F. R. McDermand, Kansas City, Mo., on The Outpost and Revelation Jane; junior champion boar, to R. T. Williams, Lees Summit, Mo., on Cavalier Fashion; senior and grand champion sow, to C. S. Keith, Lenexa, Kan., on Moore's Lady 1st.

Senior and grand championship on Duroc Jersey boar and sow went to Longview Farm, Lees Summit, Mo., on Stilts Sensation and Stilts Lucile 5th; junior champion boar, to R. H. Bywater, Camden Point, Mo., on Miss Sky Heigh 1st.

In the Hampshires, senior and grand shampionships on boar and sow went to Wickfield Farms, Cantrol, La., on Lookout Quicksilver and Inez Wickware, and junior champion boar and sow to J. S. Spangler, Clinton, Mo., on Luna's Lookout and Giantess.

In the Spotted Poland classification senior and gand championship on boar went to Earl Fry, Iowa City, Ia., on English Pathfinder; junior champion boar to A. R. McDonald, New London, Iowa, on Royal Pathfinder's Equal and senior and grand champion sow and junior female to B. A. Singleton, Epworth, Mo., on Advance Lady and Hazel Jumbo.

In the Chester Whites the senior and grand champion boar and junior champion boar were shown by W. P. Doolittle, Woodland, Mo., and Mosse & Mosse of Leavenworth, Kan., won the sow championship on Mossemeade Champion and Mossemeade Rose of Killarney.

The steer show, which opened the exhibition, was almost entirely a Colorado affair. George W. Baker of Littleton exhibited the champion Hereford steer of the show, Colorado Mixer. The champion had previously stood first in the class of eight senior yearlings. Another Baker steer stood sixth in the same class and the Baker junior steer calf, Mischief Mixer 21st, stood second in the class of nine. Mr. Baker's steer herd took fifth prize in stiff competition with the leading agricultural colleges and his senior steer calf was ninth in a class of fifteen.

W. N. W. Blayney of Denver won ninth place in a class of eighteen with his junior yearling steer, and tenth place with a senior steer calf.

DeWitt & Lamont of Denver won second and third in the junior yearling steer class and Ken Caryl Ranch of Littleton took third prize in the class of junior steer calves.

Carlot From Colorado Ranch Wins.

No grand championships were awarded in the single steer and barrow classes. Grand champion carload of hogs went to Wickfield Farm on Hampshires; carload of feeder cattle, W. T. Jones Cattle Co., Marfa, Tex., on Hereford calves; fat carload, W. J. Tod, Maple Hill, Kan., on Herefords. The champion short-fed load award went to Dan D. Casement, Manhattan, Kan., on Herefords bred on his Colorado ranch. Kansas State Agricultural College had the champion load of lambs.

The week's showing netted Colorado some seventy-three ribbons and a handsome share of the $11,255 in premiums hung up for the Hereford classes. John E. Painter, Roggen, Colo., was again elected president of the American Hereford Cattle Breeders' Association at the annual meeting held in Kansas City during the Royal. Other officers were: Vice president, Thomas Cashman, Owatonna, Minn.; directors—Byran Engle, Sheridan, Mo.; Judge Stockley, Birmingham, Ala., and H. H. Rogers, San Antonio, Tex. The report of Secretary R. J. Kinzer showed 708 new members, and 108,430 calves recorded in the past year. During the fiscal year which ended September 1, 1922, the association spent $64,682.51 for prizes. The amount offered in prizes likely will approach $85,000 next year. It was shown that about a thousand head of Herefords were on the show circuit this fall.

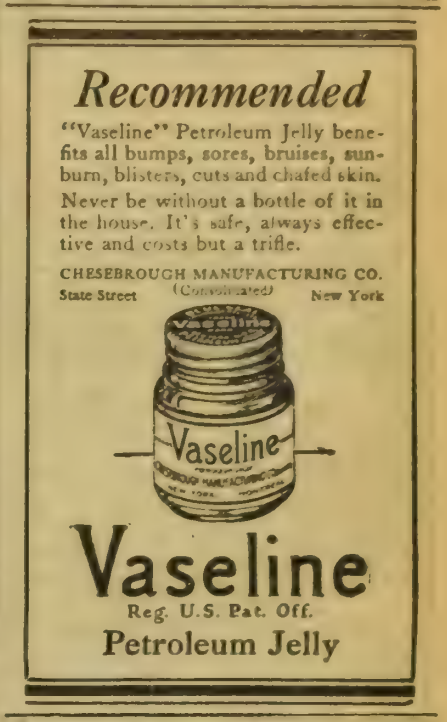
Royal Has Great Future.

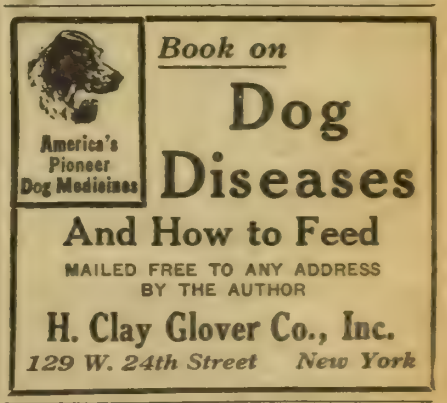
Visiting stockmen and breeders predicted a great future for the American Royal show with the new building, the better housing facilities for stock, the large judging arena, and the start made this year. For the last ten years or so only three breeds of cattle, Herefords, Shorthorns and Angus, have been shown. With the completion of the new building at the southeast corner of the stockyards, provision was made for all breeds of beef cattle, hogs, horses, mules, sheep and poultry. The Royal has always had the best Hereford breeding show and one of the best Shorthorn shows in the country.

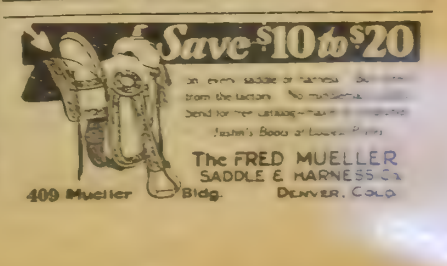
Attendance has always been a problem in Kansas City. This year a great light horse and night show was provided and Kansas City people responded by the thousands. More than 9,000 attended the first night and the crowds increased later in the week until Thursday night the big hall surrounding the judging arena was filled to standing-room. The building was dedicated by the Lindsborg, Kan., Messiah chorus of 600 voices on November 18 and 19. The new Royal home with adjacent buildings for show purposes is said to be worth $750,000. With this equipment and good management it is expected to become one of the largest shows if not the largest livestock show in the country.

Success With Rat Trap.

We have succeeded in getting rid of rats at a rapid rate by using one of the old-fashion wire cage traps. They cannot be used, however, just as they are, for they are so frail that any ordinary rat can get out after being caught. In using these traps, I first put a piece of heavy paper or cardboard on the bottom and then fix up a fine lunch for the rats, consisting of pieces of bread, meat or liver, cheese and peanuts or other nuts cracked. Then I take a gunny sack and wrap it closely around the trap excepting the hole in front. I get a box about an inch longer than the trap and put it over the trap, leaving just a hole in one end for the rats to go through. When the rats get into this trap they tear the sack to pieces but cannot get out. In two weeks' time I have caught twenty rats in my trap. Two of them got away, however, by spreading the wires apart before my little black Cocker Spaniel could kill them. On the whole, the plan is a success and I would advise Western Farm Life readers to try this method of using the cage trap. I have caught more than fifty rats in my trap this year. In addition to killing the ones trapped the little dog has caught and killed some on his own hook. —Frank A. Agnew, Nebraska.







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Ship Early Caught Furs Now.

A great many trappers are in the habit of holding their early catch of furs until into January, under the impression that they will get winter prices for them at that time. This, however, is a most eroneous idea and if the practice is followed will result in an actual financial loss to the trapper.

Furs taken in the early part of the season, while probably prime in every sense of the word, are, nevertheless, of a slightly inferior quality to those trapped from this time on, and are therefore not in very strong demand after winter skins begin coming to market. Some trappers believe that the buyers will not be able to detect the early caught skins when included with a few winter skins. In my early trapping experiences I used to think I could fool them, but such is not the case. The experienced eye of the professional fur grader is not often misled in this way. During my association with one of our largest fur-buying concerns I have known graders who could almost detect a difference between the quality of a skin taken on October 31 and one taken on November 1. This is, possibly, a little exaggerated, but at any rate is suggestive of the universal standard of seasonable fur gradation.

Another rather dubious and unprofitable scheme sometimes practiced by young and experienced trappers is the sewing up and pasting of paper over cuts that have been made in the skin when skinning. The chances are ten to one that such deceptions will be discovered and where there is an outright intention to deceive one can hardly expect the buyer to do otherwise than disregard the usual policy, observed by most fur buyers, of giving the shipper the benefit of any doubt that might exist as to the exact value of a skin. I mention these points not with a desire to absolve the dealer from any difference of opinion or misjudgment in grading your fur skins, but rather in the hope that a better understanding of business relationship may be established between trapper and buyer.

It is a recognized fact that there is an almost universal attitude of aloofness between trapper and buyer which should be eliminated. It would be a real benefit to the entire fur industry if a spirit of mutual understanding could be established between trapper and buyer, and as one who has occupied both the position of trapper and association with fur buying concerns, it is to this purpose that I shall attempt to discuss trapping questions.

My advice is that you select a good, financially sound consignment house, take proper care of your furs, ship regularly and establish a personal relationship with your buyer by an occasional informal letter telling of your trapping experiences and operations. If you will do these things you will have taken a big step toward the realization of the full pleasures and profits to be derived from following the trap line and trail. —Emil C. Wahlstrum.

How to Trap the Skunk.

Skunks are slow-moving animals, usually coming out of their dens only at night. They are found in all parts of the United States and southern Canada. At the present price of the skunk fur there is more money in trapping the skunk than any other animal. The skunk lives in dens along rocky ledges, drift piles, old badger holes, and in some cases under deserted buildings. They live on grubs, insects, eggs, birds, and any dead animals they can find.

The best set for the skunk is a trap at the mouth of the den. The trap should be put just inside the hole and should be covered with leaves or trash. The skunk is not afraid of a trap, but if the trap is covered a wandering mink may be caught. A small piece of bait, either a scrap of meat or a bird, should be put in the hole as a passing skunk might not enter if the bait were not there.

Where there are a large number of holes, the den can be recognized by the sign and by the presence of long white and black hairs.

If skunk sign is found along a dirt bank where there are no holes, an artificial hole or den can be made. Dig a hole about three inches above the level of the ground. Make it about six inches in diameter and about a foot and a half back into the bank. Pull the dirt out in front of the hole, making it look natural, and set a No. 1½ trap on the mound in front of the hole. Put a piece of meat in the back of the hole for bait. Fasten the trap to a small pole for a drag. I have found this one of the best sets where the dens cannot be found.

A good set can be made in an old gulley or a fence corner. Build a V-shaped pen of rotten logs. Place a bird in the back end and set a trap at the front. Staple the trap to one of the logs. If fresh meat is used for bait, cover the pen with brush so as to keep the magpies from bothering the traps. Never use the magpies as bait, as the skunk will only eat them when nothing else can be found.

Skunks travel up and down old irrigation ditches a great deal and a couple of traps set in the bottom of the ditch will prove a success. If a culbert can be found, set a trap at each end and put some bait on the inside.

Skunks travel a great deal and a set made in an old trail will usually bring good results. Set the trap in the trail and cover it carefully. Place a small stick on each side of the trap so the skunk will step into the trap when stepping over the stick. Care should be used in making this set, as a fox or a mink may be caught.

Skunks wander around old flood drifts going in all the holes looking for food. Traps should be set at these holes. Use bait for these sets.

Skunk traps should be visited every morning, for a skunk will chew its foot off and escape.

The best way to kill a skunk is to shoot it in the head with a 22 caliber rifle. If the skunk stinks too much hang it in a running stream for twenty-four hours and most of it will be removed. This does not injure the fur. Before skinning the skunk, grease the hands with vaseline and all the odor will be removed when the hands are washed. After skinning, stretch the hide and hang in a place where it can air out.

Most any meats or scraps will do for skunk bait. Fur companies sell prepared baits that are very good. A good bait can be made by putting fish in a bottle and allowing them to decay. This is called fish oil and is good for all meat-eating animals.—H. L. Lucas.

Butcher and Packer Hogs.

Two of the terms most commonly used on the hog market are "butchers" and "packers." Fat barrows weighing 180—300 pounds and smooth young sows of similar weight which have never suckled pigs are "butchers", while "packing hogs" are the old sows which have borne one or more litters and are rough along the under-lines.

Butcher hogs are prepared for the fresh meat trade, while packing hogs are suitable for making lard and salted and pickled meats. This does not work out entirely. In practice, however, butcher hogs predominate in the winter when the runs are so heavy that some hogs must be converted into cured products which can be carried over for several months, while packing sows are most abundant in the late summer after their litters have been weaned. At that season the total hog supply is often so small that old sows may be used for fresh meat.

The hog has been aptly called the great American mortgage lifter.

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Tangled Trails.

(Continued from Page 10.)

corner where they might be alone. It struck him that the shadows in her eyes had deepened. She was, he could see plainly, laboring under a tension of repressed excitement. The misery of her soul leaped out at him when she looked his way.

"Have you anything to tell me?" he asked, and his low, gentle voice was a comfort to her raw nerves.

"It's a man, just as I thought—the man she works for."

"Is he married?"

"No. Going to be soon, the papers say. He's a wealthy promoter. His name's Cunningham."

"What Cunningham?" In his astonishment the words seemed to leap from him of their own volition.

'James Cunningham, the big land and mining man. You must have heard of him."

"Yes, I've heard of him. Are you sure?"

She nodded. "Esther won't tell me a thing. She's shielding him. But I went through her letters and found a note from him. It's signed 'J. C.' I accused him point-blank to her and she just put her head down on her arms and sobbed. I know he's the man."

"What do you mean to do?"

"I mean to have a talk with him first off. 'll make him do what's right."

"How?"

"I don't know how, but I will," she cried wildly. "If he don't I'll settle with him. Nothing's too bad for a man like that."

He shook his head. "Not the best way, Rose Let's be sure of every move we make. Let's check up on this man before we lay down the law to him."

Some arresting quality in him held her eye He had sloughed the gay devil-may-care boyishness of the range and taken on a look of strong patience new in her experience of him. But she was worn out and nervous. The pain in her arm throbbed feverishly. Her emotions had held her on a rack for many hours. There was in her no reserve power of endurance.

"No, I'm going to see him and have it out," she flung back.

"Then let me go with you when you see him. You're sick. You ought to be in bed right now. You're in no condition to face it alone."

"Oh, don't baby me, Kirby!" she burst out. "I'm all right. What's it matter if I am fagged. Don't you see? I'm crazy about Esther. I've got to get it settled. I can rest afterward."

"Will it do any harm to take a friend along when you go to see this man?"

"Yes. I don't want him to think I'm afraid of him. You're not in this, Kirby. Esther is my little sister, not yours."

"True enough." A sardonic, mirthless smile touched his face. "'But James Cunningham is my uncle, not yours."

"Your uncle?" She rose, staring at him with big, dilated eyes. "He's your uncle, the man who—who—"

"Yes, an' I know him better than you do. We've got to use finesse—"

"I see." Her eyes attacked him scornfully. "You think we'd better not face him with what he's done. You think we'd better go easy on him. Uncle's rich, and he might not like plain words. Oh, I understand now."

Wild Rose flung out a gesture that brushed him from her friendship. She moved past him blazing with anger.

He was at the elevator cage almost as soon as she.

"Listen, Rose. You know better than that. I told you he was my uncle because you'd find it out if 'm goin' to help you. He's no friend of mine, but I know him. He's strong. You can't drive him by threats."

The elevator slid down and stopped. The door of it opened.

"Will you stand aside, sir?" Rose demanded. "I won't have anything to do with any of that villain's family. Don't ever speak to me again."

She stepped into the car. The door clanged shut. Kirby was left standing alone.

CHAPTER V.

Cousins Meet.

With the aid of a tiny looking-glass a young woman was powdering her nose. Lane interrupted her to ask if he might see Mr. Cunningham.

"Name, please?" she parrotted pertly, and pressed a button in the switchboard before her.

Presently she reached for the powder-puff again. 'Says to come right in Door 't end o' the hall."

Kirby entered. A man sat at a desk telephoning. He was smooth-shaven and rather heavy-set, a year or two beyond thirty, with thinning hair on the top of his head. His eyes in repose were hard and chill. From the conversation his visitor gathered that he was a captain in the Red Cross drive that was on.

As he hung up the receiver the man rose, brisk and smiling, hand outstretched. "Glad to meet you, Cousin Kirby. When did you reach town? And how long are you going to stay?"

"Got in hour an' a half ago. How are you, James?"

'Busy, but not too busy to meet old friends. Let me see. I haven't seen you since you were ten years old, have I?"

"I was about twelve. It was when my father moved to Wyoming."

"Well, I'm glad to see you. Where you staying? Eat lunch with me tomorrow, can't you? I'll try to get Jack, too."

"Suits me fine," agreed Kirby.

"Anything I can do for you in the meantime?"

"Yes. I want to see Uncle James."

There was a film of wariness in the eyes of the oil broker as he looked at the straight, clean-built young cattleman. He knew that the strong face, brown as Wyoming, expressed a pungent personality back of which was dynamic force. What did Lane want with his uncle? They had quarreled. His cousin knew that. Did young Lane expect him to back his side of the quarrel? Or did he want to win back favor with James Cunningham, Senior, millionaire?

Kirby smiled. He guessed what the other was thinking. "I don't want to interfere in your friendship with him. All I need is his address and a little information. I've come to have another row with him, I reckon."

The interest in Cunningham's eyes quickened. He laughed. "Aren't you in bad enough already with Uncle? Why another quarrel?"

"This isn't on my own account. There's a girl in his office—"

A rap on the door interrupted Kirby. A young man walked into the room. He was a good-looking young exquisite, dark-eyed and black-haired. His clothes had been made by one of the best tailors in New York. Moreover, he knew how to wear them.

James Cunnignham, Junior, introduced him to Kirby as his cousin Jack. After a few moments of talk the broker reverted to the subject of their previous talk.

"Kirby was just telling me that he has come to Denver to meet Uncle James," he explained to his brother. "Some difficulty with him, I understand."

Jack Cunningham's black eyes fastened on his cousin. He waited for further information. It was plain he was interested.

"I'm not quite sure of my facts," Lane said. "But there's evidence to show that he has ruined a young girl in his office. She practically admits that he's the man. I happen to be a friend of her family, an' I'm goin' to call him to account. He can't get away with it."

Kirby chanced to be looking at his cousin Jack. What he saw in that young man's eyes surprised him. There were astonishment, incredulity, and finally a cunning narrowing of the black pupils.

It was James who spoke. His face was grave. "That's a serious charge, Kirby," he said. "What is the name of the young woman?"

"I'd rather not give it—except to Uncle James himself."

"Better write it," suggested Jack with a reminiscent laugh. "He's a bit impetuous. I saw him throw a man down the stairs yesterday. Picked the fellow up at the foot of the flight. He certainly looked as though he'd like to murder our dear uncle."

"What I'd like to know is this," said Lane. "What sort of a reputation has Uncle James in this way? Have you ever heard of his bein' in anything of this sort before?"

Jack shrugged. "I wouldn't pick nunky for exactly a moral man," he said flippantly. "His idea of living is to grab all the easy things he can."

"Where can I see him most easily? At his office?" asked Kirby.

"He drove down to Colorado Springs today on business. At least he told me he was going. Don't know whether he expects to get back tonight or not. He lives at the Paradox Apartments," Jack said.

"Prob'ly I'd better see him there rather than at his office."

"Hope you have a pleasant time with the old boy," Jack murmured. "Don't think I'd care to be a champion of dames where he's concerned. He's a damned cantankerous old brute. I'll say that for him."

James arranged a place of meeting for luncheon next day. The young cattleman left. He knew from the fidgety manner of Jack that he had some important business he was anxious to talk over with his brother.

CHAPTER VI.

Lights Out.

It was five minutes to ten by his watch when Kirby entered the Paradox Apartments. The bulletin board told him that his uncle's apartment was 12. He did not take the self-serve elevator. but the stairs. The hall on the second floor was dark. Since he did not know whether the rooms he wanted were on this floor or the next he knocked at a door.

Kirby thought he heard the whisper of voices and he knocked again. He had to rap a third time before the door was opened.

"What is it? What do you want?"

If ever Lane had seen stark, naked fear in a human face, it stared at him out of that of the woman in front of him. She was a tall, angular woman of a harsh, forbidding countenance, flat-breasted and middle-aged. Behind her, farther back in the room, the rough-rider caught a glimpse of a fat, gross, ashen-faced man fleeing toward the inner door of a bedroom to escape being seen. He was thrusting into his coat pocket what looked to the man in the hall like a revolver.

"Can you tell me where James Cunningham's apartment is?" asked Kirby.

The woman gasped. The hand on the doorknob was trembling violently. Something clicked in her throat when the dry lips tried to frame an answer.

"Head o' the stairs—right hand," she managed to get out, then shut the door swiftly in the face of the man whose simple question had so shocked her.

Kirby heard the latch released from its catch. The key in the lock below also turned.

'She's takin' no chances," he murmured. "Now I wonder why both her an' my fat friend are so darned worried. Who were they lookin' for when they opened the door an' saw me? An' why did it get her goat when I asked where Uncle James lived?"

As he took the treads that brought him to the next landing the cattleman had an impression of a light being flashed off somewhere. He turned to the right as the woman below had directed.

The first door had on the panel a card with his uncle's name. He knocked, and at the same instant noticed that the door was ajar. No answer came. His finger found the electric push button. He could hear it buzzing inside. Twice he pushed it.

"Nobody at home, looks like," he said to himself. "Well, I reckon' I'll step in an' leave a note. Or maybe I'll wait. If the door's open he's liable to be right back."

He stepped into the room. It was dark. His fingers groped along the wall for the button to throw on the light. Before he found it a sound startled him.

It was the soft faint panting of some one breathing.

He was a man whose nerves were under the best of control, but the cold feet of mice pattered up and down his spine. Something was wrong. The sixth sense

(Turn to Page 19.)

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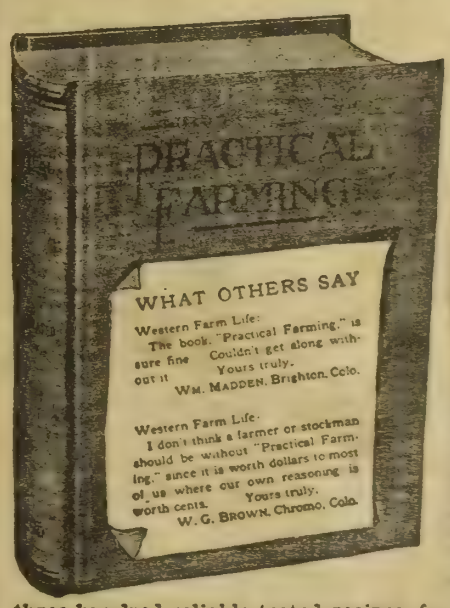

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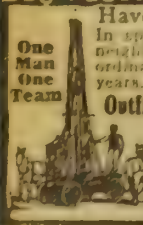

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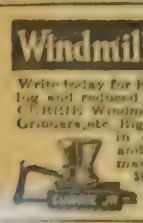

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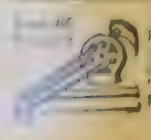

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Alfalfa for Milk Cows.

How does the third cutting of alfalfa compare with the early cuttings for milk cows?—Mrs. H. D., Adams county, Colo.

As a rule the late cutting, pound for pound, is a better milk cow feed than the earlier cuttings. The reason for this is that the third cutting is finer in its growth and contains a larger proportion of leaves and fine stems. The leaves are richer in protein than the stems and protein is an important consideration in a milk cow's ration.—G. C. W.

Feed for Breeding Ewes.

Which is the best and cheapest to feed ewes while lambing, oats at $1.75 a hundred pounds, corn at $2.50 a hundred, or oil cake at $4.50 a hundred? The roughage will be alfalfa hay.—W. E. R., Saguache county, Colo.

Ewes should come up to lambing in fairly good condition or they will have no milk for the lambs. Ewes lambing in an emaciated condition with no milk for the lambs very often will not own their lambs. Usually giving one-half to a pound of grain to the ewe daily for a few weeks previous to lambing will put them in proper condition. Alfalfa hay is an ideal roughage feed. At the price quoted oats will be the most economical grain to use, and besides oats are better for breeding ewes than corn, which is too fattening. Either oats alone or three parts oats and one part bran make an ideal concentrate ration for ewes. There will be little need for feeding oil cake to ewes getting alfalfa hay and oats and bran as a concentrate. It is very important that breeding ewes have plenty of exercise. If they are kept too closely confined the lambs are likely to be lacking in vitality and the ewes may have trouble at lambing time. —G. C. W.

Obtaining Federal Loan.

Can a government loan be obtained on improved land upon which the owner lives? How much can he borrow on 160 acres, and what interest does he have to pay, and where should he make application?—D. D. S., Kit Carson county, Colo.

Government loans on improved land are available through the Federal Land Banks. The Federal Land Bank at Wichita, Kan., is the one to which this territory must go in getting loans. It is necessary to organize a local farm loan association, having a membership of at least ten men desiring to make loans. The rate of interest is determined by the rate of interest at which the bonds sell. It can in no case exceed 6 per cent. The amount of a loan cannot exceed 50 per cent of the value of the land and 20 per cent of the insured improvements. We have some pamphlets available which give a great deal o information about making loans through the land banks. For detailed information, address the Federal Land Bank, Wichita, Kan.—G. C. W.

Curing Fistulous Withers.

We have a young mare that developed a sore on the top of her shoulder which refused to heal and discharged pus all summer. At first her neck swelled badly, but after it broke the swelling went down. It is now a deep running sore. Is this a fistula? If so, what can I do to cure it?—A. I. M., Teller county, Colo.

This is a case of "fistulous withers." Only in exceptional cases does recovery take place without surgical interference. The principal things to consider are: Removal of necrotic tissue, and drainage. The animal should have immediate attention. If delayed, sinuses (pipes) will form and treatment will be much more difficult. It will be quite necessary to employ a veterinarian in this case.—G. H. G.

Division Fence Question.

A and B build a division fence, each paying one-half of the expense. This fence was not divided. It has been partially destroyed by horses on both farms. A refuses to help make the necessary repairs. Is B liable for damages if his hogs go onto A's farm? This fence was made of woven wire with barbed wire at the top and was hog tight.—D. K. D., Montezuma county, Colo.

In my opinion, it is the duty of A to fence out the hogs.—Hamlet J. Barry, Equitable Bldg., Denver, Colo.

Ration for Milk Cows.

Our cows dropped off ten or twelve gallons daily when the first snow came and we had to keep them up and feed them at the barn. They had been on alfalfa pasture. Can you give us a good milk cow ration, making it as simple as possible as variety in grains is hard to get—say bran, ground oats and chop and perhaps something else if necessary.—N. L. I., Jefferson county, Colo.

It is difficult to change cows from fresh pasture to dry lot feeding without having some falling off in milk. For the roughage part of the ration nothing could be better than alfalfa hay of good quality. Make this the basis of the ration, giving the cows practically all they will clean up. Bran, oats and chop make a good grain combination. Without knowing the relative prices of these feeds I would suggest a mixture of one-half chop, one-fourth oats and one-fourth bran. If chop is very much higher than oats in price use more oats and less chop. If cottonseed cake or meal or linseed oil meal is not too high you might add six to eight pounds to a hundred of the mixture.

In feeding milk cows a good way to figure is to first get them to eat all the alfalfa hay and other roughage they will clean up and then give the concentrate part of the ration at the rate of about one pound daily to the cow for each three or four pounds of milk she is giving. For example, a cow giving three gallons of milk a day should have six or seven pounds of the grain a day if she is to maintain that rate of production. Another rule is to give as many pounds of grain a day as the cow produces a week of butterfat. The richer the milk a cow gives the more grain required to keep up the flow. A good rule to follow is to watch the daily production of each cow and gradually increase the grain as long as the cow responds with enough increased milk flow to pay for the added grain.

It is always very important that cows have free access to water of proper temperature. A milk cow will not drink enough ice water to keep up her normal milk production. If the water must be stored in an open tank in cold weather a tank heater will keep it at the proper temperature.

Cannot File Builder's Lien.

During September, 1920, I built a house for a man and wife and in November took their note for $260, payable one year from date. They were unable to pay it and I renewed it, adding interest. This second note is now due and they still are unable to pay it. Can I file a builder's lien on the house? If there is a mortgage on the house, does a builder's lien take precedence over it?—T. T. R., Lincoln county, Colo.

Your time for filing a lien has long since expired. The mortgage, if made before the lien is filed, takes precedence. —Hamlet J. Barry, Equitable Bldg., Denver, Colo.

Interest on Back Pay.

In working by the month my employer has failed to pay me for several months back. I have tried to collect, but he has put me off. Can I claim compound interest on back pay? What per cent is a lawyer allowed to charge for collecting such an account?—E. J. C., Lincoln county, Colo.

You may draw simple interest on the overdue account, but not compound interest. Lawyers charge from 10 per cent up for collections.—Hamlet J. Barry, Equitable Bldg., Denver.

Mortgage Comes First .

Last spring I had to borrow money of the owner of the farm I am working. I gave him a mortgage on all the crops raised, wheat being the principal crop. I have not paid the threshing bill or the mortgage. I still have most of the wheat and other crops on the place. Can the thresher man sue and attach this wheat before the mortgage is paid?—H. E. S., Baca county, Colo.

The mortgage ,if on a growing crop, comes before the threshing bill.—Hamlet J. Barry, Equitable Bldg., Denver.

Forcing Collection of Commission Notes.

C signs a contract to purchase property from B, a third party A, negotiating the deal. C signs over as first payment to B a contract he had made to buy another property on monthly payments, having made three payments. C fell down on his payments, not turning a dollar to B, who was compelled to drop the contract taken over. B had given nine notes to A, the agent, to cover his commission for selling his property to C, these notes to be paid from the rent each month. Two notes were paid. B offered to assign the contract to A, who demands his commission, refusing to accept the assigned contract. Can A, the agent, force the collection of the remaining seven notes now that no sale has been made? L. J. W., Larimer county, Colo.

You could defend on the notes on the ground of failure of consideration. Such a defense might not be good if the notes are in the hands of an innocent purchaser. You should not let your notes out until such time as you know that they will get you something.—Hamlet J. Barry, Equitable Bldg., Denver, Colo.

Blankets From Your Own Wool.

Last spring some one wrote about sending wool off to mills and having it made up into blankets. We would like to have some of our own wool made up into blankets, but have lost the names and addresses of the mills given.—Mrs. W. T. S., Idaho.

The mills referred to in the article which appeared in March 15 issue of Western Farm Life are as follows: Fergus Falls Woolen Mill, Fergus, Minn.; Valley Falls Woolen Mill, Valley Falls, R. I., and Chatham Manufacturing Co., Elkin, N. C.—G. C. W.

Consolidation of Irrigation Ditches.

There are four separate ditches on a forty-acre tract of land which I own. None of them have been surveyed or recorded and no right of way was bought or recorded. They have been allowed to grow up to willows and cottonwoods. These ditches have been used for twenty years. Can I compel the users to pay for them, survey them and clean up the trash?—T. P. L., Montezuma county, Colo.

You may bring a proceeding to have the ditches consolidated, in my opinion. The land ought not to be so burdened when there is no need for it.—Hamlet J. Barry, Equitable Bldg., Denver, Colo.

Pasturing Wheat Saves Feed.

There is little to induce a farmer having plenty of feed and other pasture to run his stock on fall-sown wheat. The man who is short of feed, especially if he has dairy cows, can save considerable expense by using wheat pasture and the effect on the wheat will not be serious providing he uses good judgment in pasturing the crop.

The general opinion of farmers and the results of experiments seem to agree rather closely in showing that wheat is rarely benefited by pasturing. Sometimes on rich bottom lands—where wheat is not often grown—pasturing will prevent an excessive growth of straw and reduce to some extent the danger of lodging. Late spring pasturing, however, will delay the crop, cause it to ripen late and almost invariably reduce the yield. Pasturing too closely or before the plants get started and pasturing when the ground is wet will usually cause more injury than will be offset by the value of the pasture. Care must also be exercised in turning cattle onto wheat pasture for the first time on account of danger of bloating.

Soft wheat as a rule furnishes better pasture than hard wheat, because of its rank and more rapid growth. The difference, however, is not sufficient to justify growing soft wheat where hard wheat is considered a better variety.

Experiments at the Kansas experiment station from 1888 to 1896 give valuable indications of what may be expected from pasturing, so far as the effect on the wheat is concerned. In these experiments, stock was not allowed on the fields until the wheat was well started, and never when the ground was wet. Neither were they pastured close enough to cause any apparent injury. The average yields for five years were as follows: Fall pastured wheat yielded 26.3 bushels per acre; spring pastured, 27.8 bushels per acre; not pastured, 29.6 bushels per acre.

A similar experiment at the Oklahoma experiment station for five years gave the following results: Wheat heavily pastured yielded 8.4 bushels per acre; lightly pastured to March 1, 11.6 bushels per acre; not pastured, 12.7 bushels per acre.

Cattle men value wheat pasture at from 25 cents to $2 per acre, depending on the wheat and the price of feeds. Most cattle men and wheat growers in the drier portions of the wheat belt of the Southwest consider any wheat pasture, secured in the fall, as that much clear gain. They claim that judicious pasturing does not injure the wheat and if they get some pasture they are certain of that much which may be all they will get out of the crop.

Find Just What You Want.

Whenever you are in need of anything for your farm, ranch or household, and do not know where to buy it, look over the Farmers' and Stockmens' Ready Reference Directory in this issue. There you will find almost everything under the sun offered for sale by reliable firms that will treat you right in both price and service.

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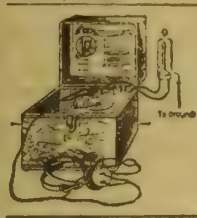

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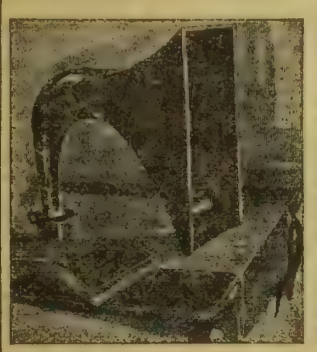

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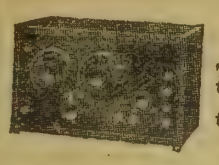

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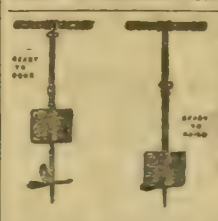
On every bottle.

Others may cost less to Buy, but none Cost Less to Use. Do not be content to merely reduce Blackleg losses. Eliminate them by using the O. M. Franklin Blackleg Aggressin. The one that saves Every Calf Every Time. 25 cts. per Dose.

THE KANSAS BLACKLEG SERUM CO.,

408-9 Livestock Exchange, Denver, Colo.



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Post Hole Auger

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The Mountain States Radio Co.

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AT AUCTION every Thursday. If you want to sell or buy, correspond with us.

DENVER HORSE & MULE CO.

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Remember—

When in need of Glasses, or if you break your present ones,

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Willard B. Lay

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in Calumet a Vital Element Most Baking Powders Lack

Don't use a leavener that does not contain white-of-egg. When you do you take chances—you run the risk of spoiling your bakings.

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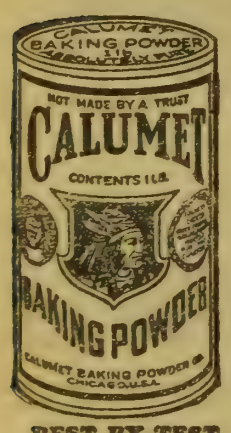
The Economy BAKING POWDER

contains a small amount of white-of-egg. This makes it possible for representatives of the company to test it frequently for leavening strength—right on the dealer's counter. Nothing but absolutely fresh stock is permitted to remain on the dealers' shelves. It must always be up to the high Calumet standard.



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Remember the white-of-egg in Calumet protects the success of your bakings. It is the economical positive bake-day aid and its sale is 2½ times as much as that of any other brand.

A pound can of Calumet contains full 16 ounces. Some baking powders come in 12 ounce instead of 16 ounce cans. Be sure you get a pound when you want it.

THE WORLD'S GREATEST BAKING POWDER

Save Up to 30%

ON YOUR FAMILY READING FOR THE ENTIRE YEAR.

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From the following Bargain Offers:

WESTERN FARM LIFE, 3 YEARS

With McCall's Magazine	1 yr., $1.45
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Denver, Colorado.

LADIES—

[illegible] us the HEMSTITCHING and BUTTON HOLE WORK on your holiday gifts. Quicker service and satisfaction guaranteed. Button-holes, 10c and 15c per doz. Hemstitching, per yard.

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Say "Bayer" and Insist!

Genuine BAYER

Unless you see the name "Bayer" on package or on tablets you are not getting the genuine Bayer product prescribed by physicians over twenty-two years and proved safe by millions for

Colds	Headache
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Neuralgia	Pain, Pain

Accept "Bayer Tablets of Aspirin" only. Each unbroken package contains proper directions. Handy boxes of twelve tablets cost few cents. Druggists also sell bottles of 24 and 100. Aspirin is the trade mark of Bayer Manufacture of Monoaceticacidester of Salycylicacid.

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Buy bedding direct from our factory. Better quality, lower prices. New feathers, best 8-oz. tick. Before you buy bedding it will pay you to send for our big "Factory to User" bargain book. Write today. It's free. SOUTHWESTERN FEATHER CO., Dept. 120, DALLAS, TEX.

The Rural Household

Questions about home problems promptly answered by letter and through the magazine. Letters from women containing helpful suggestions for improvement of rural life are always welcome. Address all communications to Mary G. Collopy, Editor Home Department, Western Farm Life, Denver, Colo.

Merry Christmas!

A merry Christmas morning
To each and every one!
The rose has kissed the dawning
And the gold is in the sun.
And may the Christmas splendor
A joyous greeting bear
Of love that's true and tender
And faith that's sweet and fair!

My Neighbor's Story.

"If you've ever been wretchedly lonesome in the midst of a crowd, then you'll understand how I've felt every year until ——" Here Mrs. Martin's voice broke. Because I knew her story, I sat there half wishing that she would not recall those years. Although families lived on all sides of her, she had never known a neighbor. Little was known of her life before she settled in the community except that someone knew someone back East who thought she had been an actress. That alone had been enough. The women of Sand Creek refused to call upon a woman "with a record like that."

"Until when, Mrs. Martin?" I replied. I was anxious to hear what had made the change. "Until last Christmas morning," she continued. "It was hardly daybreak; the air was crisp and clear; my husband and I lay sleeping, for we dreaded Christmas morning more each year since our baby had died. Suddenly, I was awakened by the singing of Christmas carols beneath our window. To my starved and lonesome heart it was as if the gates of heaven had been left ajar. Once more, I was in the great eastern city, hearing Cathedral chimes at midnight; I was once more with my old schoolmates singing carols before the hospitals and the prisons; the icy pavements ——

"My husband roused me from my reverie. We went to the window and looked down just in time to see the singers rushing into their cars. In the lead, was the new school teacher—so it was she who had driven the wedge which was to open up a broader vision and a spirit of Christmas which would last longer than one day each year."

Holiday Fun.

Give the children a chance for innocent sport,
Give them a chance for fun.
Better a playground than a court and a jail
When the harm is done!
Give them a chance—if you stint them now,
Tomorrow you'll have to pay
A larger bill for a darker ill,
So give them a chance to play.

When Dennis McCarthy wrote these lines he had in mind the moral as well as the physical development of young people. Those of us who know the rural districts well have been brought face to face with the results of lack of play—organized play. How many times we have traced the story of "that Jones girl," only to find that her life was starved for affection; she had too little recreation; little or no opportunity to entertain her boy friends in her home; lack of confidence between mother and daughter.

Let us have plenty of social life in our midst. Let us be very frank with our young people, letting them share the responsibility for keeping their minds clean. Instead of telling our girls to "be little ladies" or "not to spoon," let us tell them why. Few girls who understand life will deliberately attempt to weaken the character of their boy pals. It is the boys and girls who do not understand who find themselves despising life when it is too late.

So little effort is necessary in arranging for a hike, a skating party, a wiener roast, or a bob-sled ride with a taffy-pull as its conclusion.

Let the boys and girls gather at your home to make pop-corn balls for the community Christmas tree. When the candy sacks are filled for the school tree let it be a social evening for a small crowd. Why trim your own home tree alone? Why not let the young people gather to help? The boys are more than willing to decorate home, school or church. Let the mistletoe hang from your ceilings; your girls are in your own home having their fun there.

Through the Mail.

Here is an apple recipe which I have used for years:

Wash and remove cores from enough apples to nearly fill preserving kettle. Place apples, open side up in kettle, add water and one cup of sugar (more if size of kettle demands) and let steam until well done. Remove cover, place kettle on back of range and let simmer until they form a jelly.

One member of my family likes the apples better when first steamed.

During my life of 76 years I have gathered many eggless recipes for use when the price of eggs soars high. Would you care for a few?—Mrs. H. H. B., Boulder county, Colo.

I feel certain that many of us would welcome those eggless recipes at this time of year.—M. G. C.

* * *

Here's a suggestion for the Rural Household Department:

In frying beef steak do not salt it until ready to turn it. Treated this way it is not so liable to be tough.—Mrs. M. Ellis, Lincoln county, Colo.

Gift Suggestions.

The following gifts are easily made from materials on hand or materials purchased at little cost:

Cretonne dresser scarf.
Kitchen holders.
Clothespin bag filled with pins.
Hot dish mats.
Burlap porch cushions.

Many of your friends will appreciate such gifts as:

A jar of sausage.
Jar of home-made mincemeat.
Fresh pork.
A basket of assorted cookie jams or jelly.

Pop-Corn Balls.

2 cups molasses.
½ cup sugar.
2 tablespoons butter.

Cook until it forms a soft ball, when put into cold water; pour on the corn. Grease or flour the hands before making up the balls.

Peanut Brittle.

1 cup sugar.
¾ cup peanut meats.

Put the sugar into skillet or frying pan or a sauce pan over a slow fire, and let it melt into a golden-brown syrup, stirring it constantly. Quickly mix in the nut meats which have been cut into quarters and turn the candy upon an inverted pan; shape it with two case knives, marking it off into three-fourth inch squares as it cools. When the candy is cool enough to keep its shape, set it aside until it becomes perfectly cold, and then break it into pieces.

Candied Orange Peel.

Skins 4 oranges.
1 cup sugar.
½ cup water.

Boil skins until tender, drawing off water two or three times. Remove white inner skin with spoon and cut the yellow into strips.

Boil sugar and water to soft ball stage and cook peel in syrup three minutes. Drain and coat with sugar.

Apple Sauce Cake (Eggless).

½ cup butter.
1 cup sugar.
1 cup hot, unsweetened apple sauce.
½ teaspoon cloves.
Few grains salt.
1 teaspoon soda.
¼ cup boiling water
1 cup raisins.
2 cups flour.

Follow usual cake directions. The apple sauce serves as a liquid. Dissolve soda in the hot water.

Our Fashion Service.

All patterns 12 cents each. Address Western Farm Life, Pattern Department, 1518 Court Place, Denver, Colo.

Read This Before Ordering: Patterns ordered through this magazine are mailed promptly from the factory at Brooklyn, N. Y., and arrive in 10 to 12 days from time order reaches Western Farm Life. Be sure to specify size and number of patterns. Write your name and postoffice address plainly to avoid delay. These patterns are handled at cost, as a service to our women readers. The price of 12 cents includes postage.

4196—A New Doll Set. The little doll mother may not only make dolly's clothes but also the doll, from the models supplied herewith. The body may be of drill, unbleached muslin, oil cloth or sanitas, with a stuffing of bran, kopak or cotton. Eyes of shoe buttons, nose and lips of yarn, or, the features may be embroidered or painted. Dressed as a clown this doll will be very attractive. The suit may be of calico, cretonne or scraps of silk or satin. One or two colors of materials may be used. For the rompers cretonne or gingham is pleasing. Dolly will be so glad of the dear little pockets in her rompers, and "Pierrot" the clown will do all sorts of tricks in his comfortable costume, if his arms and legs are

4181—A Pleasing Youthful Model. Canton crepe with embroidery or kasha cloth would be attractive for this style. Blue serge with braiding or with the free edges bound with braid, would be neat and serviceable. The pattern is cut in three sizes: 16, 18 and 20 years. An 18-year size requires 4⅝ yards of 40-inch material. The width at the foot of the skirt is 2⅛ yard.

4144—A Simple Dainty Sack. In white or colored silk or cotton crepe, or in voile with filet lace or bands of embroidery, this style will be very pleasing. It slips on over the head, is comfortable, and falls in soft folds. The pattern is cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires 1⅛ yard of 32-inch material.

3656—A Splendid House Dress for Mature Figures. It is cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches. A 38-inch size will require 5 yards of 36-inch material. The width of the skirt at the foot is two yards. Gingham, chambrey, figured percale, poplin, repp, linen and calico may be used for this model. The sleeve may be finished in wrist or elbow length.

4177—A Popular Model. Coat dress styles have been "rediscovered" and are shown this season in many attractive versions. The design here portrayed has very simple lines, and is easy to develop. It is good for veldyne, kasha, broadcloth or velvet. The pattern is cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires 5⅝ yards of 40-inch material. The width at the foot is 2⅛ yards.

3854—An "Easily Made" Frock. This becoming "slip on" model has smart jaunty lines, and a choice of sleeve finish one may have it fitted in wrist length style, or with cuff in elbow length. Serge in blue or brown is nice for this dress, as is also velveteen or prunella. Collar and cuffs of organdie or linen will be a pleasing variation. The pattern is cut in five sizes: 6, 8,, 10, 12 and 14 years. 10-year size requires 2½ yards of 44-inch material.

4187—An Up-to-Date Dress for the Growing Girl. This makes a splendid school dress in serge with contrasting material, or in checked or plaid woolen with trimming of braid or a finish of machine stitching. The waist has the now so popular side closing. The sleeve may be finished in wrist or elbow length. The pattern is cut in four sizes: 6, 8, 10 and 12 years. A 10-year size requires 2¾ yards of 44-inch material.

4193—A Comfortable Protective Apron. Blue and white check gingham with rick rack braid for trimming is here illustrated. Crepe with a finish in colored yarn would be nice, as would also be percale or sateen with binding in a contrasting color. The pattern is cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires 4½ yards of 36-inch material.

CATALOGUE NOTICE.

Send 12 cents in silver or stamps for our UP-TO-DATE FALL AND WINTER 1922-1923 BOOK OF FASHIONS, showing color plates, and containing 500 designs of Ladies', Misses' and Children's Patterns, a concise and comprehensive article on dressmaking, also some points for the needle (illustrating 30 of the various simple stitches), all valuable hints to the home dressmaker.

fastened so as to be moveable. The pattern, comprising the doll and the garments, is cut in three sizes: Small, 12 inches; medium, 16 inches; large, 20 inches in length. The doll requires for a medium size ½ yard. The rompers ⅞ yard. The suit and hat, 1¼ yard of 27-inch material.

But I'm so perlite an'
Tend so earnestly to biz,
That mother says to father:
"How improved our Willie is!"
But father, having been a boy hisself,
Suspicions me
When, just before Christmas,
I'm as good as I kin be!
—Eugene Field.

Why I Wrote "Tangled Trails"

A MYSTERY story such as "Tangled Trails" is a guessing contest between the author and the reader. In this, my first attempt at a novel of this type, I wanted to satisfy myself that I could spin the web, sustain the reader's interest, and keep him guessing to the finish. Those who write mystery stories usually assume that the whole interest lies in the plot. They pay little attention to making the characters real and vital persons. I wanted to do more than merely spin a plot that would keep the reader guessing to the finish. I wanted to write a story that in addition would have human interest, in which real flesh and blood characters would move logically to reasonable ends.

I do not claim to have done this in "Tangled Trails." All I say is that this is what I tried to do. Naturally, I wanted the story to have a realistic note. So I set it in our own West, in the city where I live. Some of the places I disguised thinly, but essentially "Tangled Trails" is a story of Denver, of Colorado and Wyoming.

In many such stories as "Tangled Trails," the author does not play fair. He brings in near the end of the story some new character or evidence not hinted at before to help him out of his dilemma, evidence that he has held back from the reader but has had up his sleeve all the time. The gist of the whole matter is that he should not do this. He should put his chessmen on the board and move them according to the rules so as to give the reader a chance to outguess him.

So there you are. Some of the readers of Western Farm Life will outguess me, as they read "Tangled Trails." They will pick out the guilty party or parties before they reach the concluding chapters. Some will not. Anyhow, I hope all will find the game a fascinating and interesting one. If not, it will be because I have done my part of the work poorly and unskillfully.

WILLIAM MacLEOD RAINE.

Editor's Note.—This most fascinating mystery story begins in this issue of Western Farm Life. Mr. Raine, who is a Denver man, following the success of his story, "Big Town Round-Up," and the absorbing novel of the oil country, "Gunsight Pass," demonstrates his versatility by writing "Tangled Trails" with all the vigor of his best Western style and with the added thrills of a first-class mystery story.

She Knows

how to use left-over bread and make the farm hands like it

LOTS of bread was used on her table, but lots of it also was left over. She used to throw away a lot.

But now she knows what to do with it, for one day she found a recipe which told her how to **use raisins** in bread pudding.

It made "a new dish" of it. Men who didn't like plain "bread pudding" were delighted with the raisins and became enthusiasts.

Raisin Bread Pudding

Three-fourths cup Sun-Maid Seeded Raisins, 2 eggs, ½ teaspoon salt, butter size of an egg, ½ cup sugar, cinnamon to taste, ½ large loaf of stale bread, 2 bananas or apples.

Soak the stale bread over night in water. When time to make the pudding press as much water as possible from the bread so that the bread is about the same consistency as dough, then take a fork and get all lumps out. Do not leave the crust if it cannot be mashed to the same consistency as the bread. Add well beaten eggs, salt and stir. Add raisins mixed with the butter. Put into dish in layers, covering each layer with sliced banana, sugar and cinnamon. Bake in slow oven until brown. Serve with whipped cream.

All measurements for this recipe are level.

Blue package (seeded) best for pie and bread.

Now she never wastes a slice of bread. She even has to bake bread especially to make this pudding.

Try the recipe and see how good it is—with

Sun-Maid Raisins

Hear your men folks call for more, and how they compliment you. Try it now.

Be sure you get Sun-Maids—the finest raisins grown.

Your retailer should sell you Sun-Maid Seeded Raisins (in 15 oz. blue packages), the best bread-pudding raisins, for not more than 20c.

Insist on Sun-Maids, the kind you know are good.

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Mr. Hick is so confident that Egg Lay Tablets will double and treble the egg yield that he is making a special guaranteed offer of one regular double strength $1.00 package of Egg Lay Tablets and a full size package of Hick's famous Lice-Go Tablets for only $1.00.

Lice-Go is selling by the thousands. The medicine is fed into the blood and comes out through the pores of the skin, and every louse or tick on the hen's body dies. Lice-Go keeps hens free from lice during and after moulting. If you send $1.00 for packages of Egg Lay Tablets and two $1.00 packages of Lice-Go (a total of only $3.00) to your order. Send $3.00 today. Give name and address, state whether you want Egg Lay Tablets or Lice-Go Tablets, and to C. M. Hick & Company, Dept. 946, 1514 So. Wabash Ave., Chicago, Ill. If you prefer, send no money. Just write name and address and pay postman $3.00 and postage on delivery. If after two months' use you are not absolutely satisfied, write Mr. Hick and your money will be refunded. Remember, Egg Lay Tablets are guaranteed, so don't hesitate to make the test. Adv.

Good News When the representative of the State Poultry Association calls on you with the latest information regarding Housing, Care and Feeding of your Poultry, be sure to have him call on the Poultry Association, P. O. Box 1794, Denver, Colo.

Profitable Farm Poultry

PAUL C. JAMIESON.

Inquiries on all phases of poultry production promptly answered by mail. Letters telling of your experiences and successes always welcome. Address all communications to Poultry Department, Western Farm Life, Denver.

Always feed the scratch grain in deep litter during the winter. If they have to work for their feed they get warmed up early in the morning and will consume much more, with a resultant increase in egg production.

Empty the water jugs after dark during cold weather so the hens will not have to break through the ice the next morning and get ice-cold water. It is worse than none at all. Of course it is then necessary to give them a fresh supply with the chill taken off early the next morning.

If a hen is good enough to keep, she is good enough to feed. Never make the mistake of thinking that a hen can "hunt her feed" and that all you have to do is turn her loose and gather the eggs once a day. She may lay an egg now and then, but your profits from such action will never help you lift the mortgage.

Curing the Egg-eating Hen.

A reader writes that he has cured a good many hens of egg-eating by cutting off the tip of the bill until it bleeds or almost bleeds It blunts the bill and makes it tender so the hen cannot break a hard-shelled egg and does the hen no harm.

Use Good Whitewash.

Whitewash properly made and carefully applied, will cleanse, disinfect and stay on. To make whitewash that will meet these requirements, slack ten pounds of quicklime in two gallons of water. Cover the container and allow the lime to slack for one hour. Add enough warm water to make the whitewash spread easily with a brush. To each five gallons add one pound of glue—stick glue dissolved in warm water—one-fourth pound of salt and one pint of crude carbolic acid. Apply evenly while warm with a good whitewash brush.

Good Poultry Record.

We read with considerable interest Mrs. E. G. Chamberlain's report of her poultry returns for the period from March 15, 1922, to September. Perhaps Western Farm Life readers of the poultry department will be interested in my report for the same period.

Our inventory March 15 showed: Hens and pullets, 134; cockerels, 8. Inventory September 15: Hens, 126; pullets, 291; cockerels, 14; cock birds, 3. The income from March 15 to September 15 was as follows: Total returns, $608.49; total expense, $251.94; total profits to September 15, $365.55, and adding the value of poultry and eggs used for the table, $63.72, brings the grand total to $420.27.

Considerable of my expense was for new equipment, buildings, and high-class baby chicks and hatching eggs, all of which adds to the total value of the stock and plant.—Mrs. Harry E. Langridge, Boulder County, Colo.

Big Colorado Flock of Turkeys.

Turkeys raised by Mr. and Mrs. A. W. Baker of La Plata county, Colo., from a breeding flock of twenty-three turkey hens two years ago were more profitable than the herd of twenty-three brood sows. This year they grew probably the largest flock of turkeys in Colorado. "When we checked up the return two years ago," said Mrs. Baker, "we found we had made more clear money from the turkeys than from the twenty-three brood sows, so we decided to go into the turkey business on a larger scale. We saved 209 turkey hens and purchased eighteen gobblers. Last spring we hatched 3,800 young turkeys. We did not have an incubator, but hatched all of them with the turkey hens. We always set several hens at one time and divide the youngsters so that each hen had all she could care for. This enabled us to quickly get hens, not needed to raise young, back on the job of laying eggs for hatching.

"We fed the youngsters on hard-boiled eggs, seasoned with pepper and a little salt, for ten days after they were hatched. Then we began with bran, milk and tankage. They have had these feeds ever since and have grown fat as well as developing good frames.

"We dipped all the young turkeys twice with a good stock dip, once when they were six weeks old and again when they were three months old. One must be careful to treat them when the sun is shining, so they will not catch cold.

"The hens were set in small houses and were confined to these with their young for two days after the hatch. They were then permitted to run at large over eighty acres. We herded them like sheep are herded on range. The children were home and they helped. We put up a tent and slept on the job where we could protect them.

"The owls, coyotes, skunks and dogs were our enemies. They were on the job soon after the turkeys were hatched and our troubles began. We had to fence in a place where all of the turkeys could be driven in at night. They roosted in the cedar trees. Soon we found that the owls were getting them. We set traps and have caught a good many of them. The skunks and dogs got their share, but in spite of all, we have more than 2,000 left and are in the turkey business to stay. We have learned a great deal about the enemies and about the care of turkeys and believe we can be more successful another year."

The Bakers' have a daughter who is a junior in Colorado University and the profits from the turkeys are paying the expense of her college education.—P. C. J.

Turkeys Cured of Paralysis.

Some young turkeys were recently cured of paralysis by Mrs. Joseph Hale of El Paso county. She writes as follows in telling of her success:

"I put the turkeys affected in a comfortable coop by themselves and gave each one twice a day in a teaspoonful of water three drops of a mixture composed of equal parts of tincture of nux vomica and Fowler's solution of arsenic. I think two drops would probably be enough for cockerels."

Your cure is all right. Paralysis is often caused from lack of proper feed. The birds seem to grow in weight faster than in strength. To overcome this condition it is well to give a conditioner such as Epsom salts and then plenty of protein, bone meal and milk in the ration and also supply plenty of green feed.—P. C. J.

Pullets Go Into Fall Molt.

Our White Leghorn pullets, hatched March 20, began laying in August and in September fully 40 per cent of the flock was laying. We tried to hold them back by reducing the beef scrap in their ration. Quite a number of these pullets now have gone into a partial molt. They seem to be in the best of health and we are at a loss to understand why they should molt at this time.—W. E. H. Pueblo county, Colo.

Leghorn pullets hatched in March ordinarily will not molt the first year if they are handled under ordinary farm conditions. These pullets undoubtedly have been hastened in their maturity by extra care and liberal feeding of well balanced rations. Sometimes pullets will go through a neck molt without its materially reducing their winter egg production. It would hardly be advisable to make any change in the rations being used at the present time. You might keep the water away from the pullets during one afternoon and the next morning give them a small amount of warm water containing one-half teaspoon of Epsom salts to each bird.

If you can purchase some sunflower seed at a reasonable price, feed at the rate of about a handful to each six pullets daily for several days. With this method of treating your pullets you should be able to bring them out of a partial molt and back into egg production in a short time.—P. C. J.

Pullets Have Diphtheritic Roup.

My pullets are coming down with a disease which seems to start with indications of choking. A pullet will make a noise as though something was fastened in her throat and later becomes droopy, standing around and gasping for breath. I have put a roup remedy in the water and have administered some to the sick ones. Now most of the flock are showing signs of some trouble and they seem to grow worse instead of better. Their heads are not swollen as in ordinary roup. Most of the trouble seems to be in the throat and mouth. Some of them have yellow ulcers or blisters in their throats. In a few cases there is a slight discharge from the nostrils and the eyes water. Is there such a thing as diphtheria among chickens?—Mrs. A. L. B., Fremont county, Colo.

Your description would indicate that your pullets are affected with diphtheritic roup. This disease is quite different in its symptoms from the ordinary form of roup. It almost invariably comes from infected fowls being introduced into the flock or by being brought to the farm by birds or other animals.

Treatment of the fowls affected requires much time and patience and as a rule does not pay. It is often better to kill the sick ones and burn their carcasses. The poultry house should be thoroughly disinfected with a crude carbolic acid solution. If you attempt to treat the sick birds individually they should be isolated and the false membranes removed from their throats with a wad of absorbent cotton dipped in a solution of salt water. A number of remedies are recommended in "Farmers' Bulletin 957," United States Department of Agriculture, which can be obtained by addressing the Department, Washington, D. C. The extension service of the Colorado Agricultural College also has some copies of this bulletin for distribution.

If you are not entirely satisfied with this diagnosis of the disease, which is the best we can give from the description, kill one of the birds having the disease, pack the affected parts in powdered borax in a mason fruit jar, and send to the pathological department of the Colorado Agricultural College, Fort Collins. There will be no charge for making a diagnosis and this is the most certain way to obtain a correct report on the trouble.—P. C. J.

Heavy Feeding of Potatoes.

In a recent issue of Western Farm Life I saw that heavy feeding of potatoes to laying hens reduces their egg production. Will the feeding of large amounts of watermelon, cucumbers and pumpkins have the same effect?—J. A., Idaho.

The harmful results from feeding potatoes to laying hens seems to be from their fattening tendency. Laying hens should be in good flesh but never overly fat. Potatoes are also very bulky in proportion to their nutrient value and fill up the crops of the hens without supplying the necessary material for egg production. This would undoubtedly be true also of watermelons and cucumbers, although they would probably be more easily digested and more other feed would be eaten with them. Pumpkins also are relatively low in feed value. They contain about the same amount of protein as potatoes, there being about 1.1 pounds of protein to 100 pounds of potatoes or pumpkins. Pumpkins contain less corbohydrates and fats and for that reason would not be quite so fattening a feed as potatoes.—P. C. J.

Pullets Have Leg Weakness.

Something is wrong with my pullets. They get weak in the legs and droop around until they get so bad I have to kill them. What is the trouble and what can I do to prevent it from spreading through the flock?—J. H. N., Fremont county, Colo.

These pullets probably are affected with what is called "leg weakness." The trouble is often attributed to improper feeding, but may result from a variety of causes. It is usually not very hard to cure. The difficulty seems to be that the birds grow in weight more rapidly than in strength. Epsom salts should be given in a bran mash slightly moistened at the rate of one pound of the salts to 100 birds. Place finely ground bone where the pullets have free access to it. Increase the amount of meat scrap in the ration and supply plenty of green feed.—P. C. J.

Lengthening the Hen's Day.

In order to get a full day's work from the hens during the season of short daylight hours many poultrymen have adopted the practice of using electric lights to lengthen the day. The United States Department of Agriculture points out that the total year's production has not been increased very materially by eking out the short daylight hours with electricity, but it does increase the production during the winter months, when eggs are worth more and thus increases the profit. In tests carried on by the Department during the fall and winter of the two years 1920 and 1921, lights were used from November 1 to March 20.

Each year a flock of fifty pullets was used. The first year, during the period when lights were used, the lighted pen produced fifty dozen more eggs than the same number of pullets in an un-

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80 pages chock full of information about the feeding and rearing of chicks, culling of hens, etc. Tells how to keep chickens healthy and how to make them pay. Whether a beginner or a professional, Conkey's Book is worth dollars to you. Sent for 6 cents in stamps to pay postage.

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lighted house. The second year the pullets in the lighted pen laid more than sixty dozen eggs in excess of an unlighted flock of the same size and quality. One 75-watt light was used for the fifty pullets 2½ hours daily for 140 days. It was turned on at 4:30 in morning and allowed to run until daylight, being turned off by the poultryman when he came to work. It was turned on automatically by an alarm-clock device.

An average length of day of from twelve to thirteen hours gives the best results. Adding the extra light in the morning is the most convenient method, although some poultrymen use light both morning and evening. The hours added to the hens' working day should be the same in either case. Making the day longer than thirteen hours forces the birds too much.

When lights are used in the evening some arrangement for dimming them is required so that the hens will go to roost before they are entirely turned out.

When artificial lights are used the hens must be fed more. In fact, the object of the plan is to give the hens an opportunity to eat more with the result that they will be forced to lay more eggs, providing they are of a laying strain. Dry mash should be available at all times and scratch feed should be used in deep litter to make them exercise. A feed of grain should be put in the litter at night so that the hens can go to work as soon as the lights go on in the morning.

It is important to have plenty of fresh water handy so that the hens can get it whenever they are eating. In the winter when lights are turned on automatically in the morning some provision must be made to keep the water from freezing when it is kept in the house all night. The Department uses an electric light with a carbon bulb immersed in the drinking water. The bulb is tightly covered with a piece of black cloth so no light is thrown in the pen.

As a general rule it is only profitable to use artificial lighting on pullets, and the best results are obtained on well-matured pullets. Hens to be used for breeders should not be forced for egg production with electric lights during the period just preceding the breeding season, as forced laying at that time is apt to cause poorer hatches and produce weaker chickens than would be obtained from hens under normal winter conditions.

Chickens can be kept out of the self-feeder for hogs by hanging a hinged flap in front of the feed trough. The pigs will push it back to get the feed.

Hens will not produce eggs from ice. Keep the drinking pan thawed out.

Tangled Trails.

(Continued from Page 13.)

of danger that comes to some men who live constantly in peril was warning him.

"Who's there?" he asked sharply.

No voice replied, but there was a faint rustle of some one or some thing stirring.

He waited, crouched in the darkness.

There came another vague rustle of movement. And presently another, this time closer. Every sense in him was alert, keyed up to closest attention. He knew that some one, for some sinister purpose, had come into this apartment and been trapped here by him.

The moments flew. He thought he could hear his hammering heart. A stifled gasp, a dozen feet from him, was just audible.

He leaped for the sound. His outflung hand struck an arm and slid down it, caught at a small wrist, and fastened there. In the fraction of a second left him he realized, beyond question, that it was a woman he had assaulted.

The hand was wrenched from him. There came a zigzag flash of lightning searing his brain, a crash that filled the world for him—and he floated into unconsciousness.

CHAPTER VII.

Foul Play.

Lane came back painfully to a world of darkness. His head throbbed distressingly. Querulously he wondered where he was and what had taken place.

He drew the fingers of his outstretched hand along the nap of a rug and he knew he was on the floor. Then his mind cleared and he remembered that a woman's hand had been imprisoned in his just before his brain stopped functioning.

Who was she? What was she doing here? And what under heaven had hit him hard enough to put the lights out so instantly?

He sat up and held his throbbing head. He had been struck on the point of the chin and gone down like an axed bullock. The woman must have lashed out at him with some weapon.

In his pocket he found a match. It flared up and lit a small space in the pit of blackness. Unsteadily he got to his feet and moved toward the door. His mind was quite clear now and his senses abnormally sensitive. For instance, he was aware of a faint perfume of violet in the room, so faint that he had not noticed it before.

There grew on him a horror, an eagerness to be gone from the rooms. It was based on no reasoning, but on some obscure feeling that there had taken place something evil, something that chilled his blood.

Yet he did not go. He had come for a purpose, and it was characteristic of him that he stayed in spite of the dread that grew on him till it filled his breast. Again he groped along the wall for the light switch. A second match flared in his fingers and showed it to him. Light flooded the room.

His first sensation was of relief. This handsome apartment with its Persian rugs, its padded easy-chairs, its harmonious wall tints, had a note of repose quite alien to tragedy. It was the home of a man who had given a good deal of attention to making himself comfortable. Indefinably, it was a man's room. The presiding genius of it was masculine and not feminine. It lacked the touches of adornment that only a woman can give to make a place homelike.

Yet one adornment caught Kirby's eye at once. It was a large photograph in a handsome frame on the table. The picture showed the head and bust of a beautiful woman in evening dress. She was a brunette, young and very attractive. The line of head, throat, and shoulder was perfect. The delicate, disdainful poise and the gay provocation in the dark, slanting eyes were enough to tell that she was no novice in the game of sex. He judged her an expensive orchid produced in the civilization of our twentieth-century hothouse. Across the bottom of the picture was scrawled an inscription in a fashionably angular hand. Lane moved closer to read it. The words were, "Always, Phyllis." Probably this was the young woman to whom, if rumor were true, James Cunningham, Senior, was engaged.

On the floor, near where Kirby had been lying, lay a heavy piece of agate evidently used for a paper-weight. He picked up the smooth stone and guessed instantly that this was the weapon which had established contact with his chin. Very likely the woman's hand had closed on it when she heard him coming. She had switched off the light and waited for him. That the blow had found a vulnerable mark and knocked him out had been sheer luck.

Kirby passed into a luxurious bedroom beyond which was a tiled bathroom. He glanced these over and returned to the outer apartment. There was still another door. It was closed. As the man from Wyoming moved toward it he felt once more a strange sensation of dread. It was strong enough to stop him in his stride. What was he going to find behind that door? When he laid his hand on the knob pinpricks played over his scalp and galloped down his spine.

He opened the door. A sweet sickish odor, pungent but not heavy, greeted his nostrils. It was a familiar smell, one he had met only recently. Where? His memory jumped to a corridor of the Cheyenne hospital. He had been passing the operating-room on his way to see Wild Rose. The door had opened and there had been wafted to him faintly the penetrating whiff of chloroform. It was the same drug he sniffed now.

He stood on the threshold, groped for the switch, and flashed on the lights. Sound though Kirby Lane's nerves were, he could not repress a gasp at what he saw.

Leaning back in an armchair, looking up at him with a horrible sardonic grin, was his uncle James Cunningham. His wrists were tied with ropes to the arms of the chair. A towel, passed round his throat, fastened the body to the back of the chair and propped up the head. A bloody clot of hair hung tangled just above the temple. The man was dead beyond any possibility of doubt. There was a small hole in the center of the forehead through which a bullet had crashed. Beneath this was a thin trickle of blood that had run into the heavy eyebrows.

The dead man was wearing a plaid smoking jacket and oxblood slippers. On the tabouret close to his hand lay a half-smoked cigar. There was a grewsome suggestion in the tilt of the head and the gargoyle grin that this was a hideous and shocking jest he was playing on the world.

Kirby snatched his eyes from the grim spectacle and looked around the room. It was evidently a private den to which the owner of the apartment retired. There were facilities for smoking and for drinking, a lounge which showed marks of wear, and a writing desk in one corner.

The desk held the young man's gaze. It was open. Papers lay scattered everywhere and its contents had been rifled and flung on the floor. Some one, in a desperate hurry, had searched every pigeon-hole.

The window of the room was open. Perhaps it had been thrown up to let out the fumes of the chloroform. Kirby stepped to it and looked down. The fire escape ran past it to the stories above and below.

The young man had seen more than once the tragedies of the range. He had heard the bark of guns and had looked down on quiet dead men but a minute before full of lusty life. But these had been victims of warfare in the open, usually of sudden passions that had flared and struck. This was different. It was murder, deliberate, cold-blooded, atrocious. The man had been tied up, made helpless, and done to death without mercy. There was a note of the abnormal, of the unhuman, about the affair. Whoever had killed James Cunningham deserved the extreme penalty of the law.

He was a man who no doubt had made many enemies. Always he had demanded his pound of flesh and got it. Some one had waited patiently for his hour and exacted a fearful vengeance for whatever wrong he had suffered.

Kirby decided that he must call the police at once. No time ought to be lost in starting to run down the murderer. He stepped into the living-room to the telephone, lifted the receiver from the hook, and—stood staring down at a glove lying on the table.

As he looked at it the blood washed out of his face. He had a sensation as though his heart had been plunged into cracked ice. For he recognized the glove on the table, knew who its owner was.

It was a small riding gauntlet with a device of a rose embroidered on the wrist. He would have known that glove among a thousand.

He had seen it, a few hours since, on the hand of Wild Rose.

CHAPTER VIII.

By Means of the Fire Escape.

Kirby Lane stood with fascinated eyes looking down at the glove, muscles and brain alike paralyzed. The receiver was in his hand, close to his ear.

A voice from the other end of the wire drifted to him. "Number, please."

Automatically he hung the receiver on the hook. Dazed though he was, the rough rider knew that the police were the last people in the world he wanted to see just now.

All his life he had lived the adventure of the outdoors. For twelve months he had served at the front, part of the time with the forces in the Argonne. He had ridden stampedes and fought through blizzards. He had tamed the worst outlaw horses the West could produce. But he had never been so shock-shaken as he was now. A fact impossibly but dreadfully true confronted him. Wild Rose had been alone with his uncle in these rooms, had listened with breathless horror while Kirby climbed the stairs, had been trapped by his arrival, and had fought like a wolf to make her escape. He remembered the wild cry of her outraged heart, "Nothing's too bad for a man like that."

Lane was sick with fear. It ran through him and sapped his supple strength like an illness. It was not possible that Rose could have done this in her right mind. But he had heard a doctor say once that under stress of great emotion people sometimes went momentarily insane. His friend had been greatly wrought up from anxiety, pain, fever, and lack of sleep.

In replacing the telephone he had accidentally pushed aside a book. Beneath it was a slip of paper on which had been penciled a note. He read it, without any interest.

"Mr. Hull he come see you. He sorry you not here. He say maybe perhaps make honorable call some other time.

"S. Horikawa."

An electric bell buzzed through the apartment. The sound of it startled Kirby as though it had been the warning of a rattlesnake close to his head. Some one was at the outer door ringing for admission. It would never do for him to be caught here.

He had been trained to swift thought reactions. Quickly but noiselessly he stepped to the door and released the catch of the Yale lock so that it would not open from the outside without a key. He switched off the light and passed through the living-room into the bedchamber. His whole desire now was to be gone from the building as soon as possible. The bedroom also he darkened before he stepped to the window and crept through it to the platform of the fire escape.

The glove was still in his hand. He thrust it into his pocket as he began the descent. The iron ladder ran down the building to the alley. It ended ten feet above the ground. Kirby lowered himself and dropped. He turned to the right down the alley toward Glenarm street.

A man was standing at the corner of the alley trying to light a cigar. He was a reporter on the Times, just returning from the Press Club where he had been playing a pool tournament.

He stopped Lane. "Can you lend me a match, friend?"

The cattleman handed him three or four and started to go.

"Just a mo'," the newspaper man said, striking a light. "Do you always —puff, puff—"leave your rooms"—puff, puff, puff —"by the fire escape?"

Kirby looked at him in silence, thinking furiously. He had been caught, after all. There were witnesses to prove he had gone up to his uncle's rooms. Here was another to testify he had left by the fire escape. The best he could say was that he was very unlucky.

"Never mind, friend," the newspaper man went on. "You don't look like a second-story worker to yours truly." He broke into a little amused chuckle. "I reckon friend husband, who never comes home till Saturday night, happened around unexpectedly and the fire escape looked good to you. Am I right?"

The Wyoming man managed a grin. It was not a mirthful one, but it ser[ved]. "You're a wizard," he said admiring[ly].

The reporter had met a boot[leg] earlier in the evening and had two or

(Turn to Page 22.)

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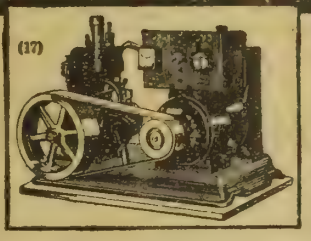

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POULTRY

RHODE ISLAND REDS.

DARK BRILLIANT, LONG BACK R. C. REDS—Type, capacity, $2.50, $3. Charles Sigle, Lucas, Kan.

"DEWEYLAWN" ROSE COMB REDS, CHOICE breeding cockerels and pullets for sale. C. E. Dewey, Fort Morgan, Colo.

SINGLE-COMB RHODE ISLAND DARK RED cockerels, exhibition stock, prize winners, $2.50 to $4. William Ruger, Yuma, Colo.

S. C. REDS—TEN YEARS CAREFUL MATING for egg production. Cocks and cockerels, $2 to $5. Special mating, $5. L. A. Davids, Henderson, Colo., or Dr. F. S. Schoenleber, Stock Yards, Denver.

THOROUGHBRED SINGLE-COMB RHODE Island Red cockerels, direct descendants of Madison Square Garden prize winners. Line bred from selected heavy laying type for 19 years; $2.50 and $3. Carl Wilson, Maher, Colo.

LOWER'S POULTRY FARM, ARVADA, COLO.—Breeder of line-bred heavy-laying type Single-Comb Rhode Island Reds for twenty years. Hatching eggs and baby chicks Jan. 1. Like all things of superior merit, demand is greater than supply. Please place your order early. Catalog on request.

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SINGLE-COMB WHITE LEGHORNS—BOOKING orders for baby chicks 1923, delivered from American highest official record strain (Hollywood); also breeding cockerels, $5 to $15; guarantee to please. Agency for Wishbone Mammoth Incubator and Brooders. Mile High Poultry Farm, Wheatridge, Colo.

BARRON SINGLE COMB WHITE LEGHORN baby chicks, from J. R. Mooney's imported pedigreed, trap-nested 288-egg strain; $20 per 100, postpaid; 10% discount on all orders received before Jan. 15; 25% deposit to accompany order, balance 10 days before date of shipment. Jas. Ross, Belvue, Kan.

WALKER'S WHITE LEGHORNS—BABY CHICKS for 1923 from our heavy winter layers; Hoganized for heavy egg production. In the business eighteen years right here in North La Junta. We are not a mere hatchery; we produce our own eggs and chicks; no bought-up junk here. Stop keeping chickens, let Walker's chickens keep you. Riverside Poultry Farm, H. D. Walker & Sons, La Junta, Colo.

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BUFF MINORCAS, THE COMING BREED FOR eggs and exhibition. Geo. B. Gibbs, Redfield, Kansas.

WYANDOTTES.

WHITE WYANDOTTE COCKERELS, TRAP-nested. Mrs. Mary M. Wright, Rt. 2, Box 314, Boulder, Colo.

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CHOICE SINGLE-COMB BUFF ORPINGTON PULlets. Lee Lantz, LaJunta, Colo.

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BLACK LANGSHANS, THE WINTER LAYERS—Cockerels, $2.50 to $5. O. Moon, Ft. Morgan, Colo.

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SINGLE-COMB PUREBRED BLACK MINORCA cockerels, $2 each. White Langshan cockerels, $2 each. Purebred Bourbon Red Turkey gobblers, $7 each. Mrs. H. C. Maranville, Benkelman, Neb.

IF IT WEARS FEATHERS WE HAVE IT OR will get it for you. Headquarters for pullets and cockerels. Have on hand classy lot of Barred Rock and Ancona pullets. Oat sprouters to get you winter eggs. Write or phone. Champney's Poultry Yards, 2057 S. Broadway, Denver, Colo.

TURKEYS.

WANTED—TO BUY OR EXCHANGE BOURBON Red Turkey tom. John Bolm, Ft. Garland, Colo.

PURE-BRED MAMMOTH BOURBON TOMS AND hens, $7, $4. K. K. Young, Ft. Morgan, Colo.

PURE BRONZE TURKEYS, STRONG, HARDY, early hatched. Toms, $15; pullets, $7. Mrs. E. E. Brubaker, Lamar, Colo.

BRONZE TURKEYS, TRULY MAMMOTH; YOU can't buy better; young toms, $10 to $15. Orville Roberts, Capulin, New Mex

MAMMOTH BRONZE TURKEY TOMS, $12.50 TO $15; pullets, $7.50 to $8. Satisfaction guaranteed. C. A. Cobb, Fowler, Colo.

PURE WHITE HOLLANDS—WON FIRST AT state Fair; very domestic, large, hardy; 20-lb. toms, $10. Fern Wade, Wiley, Colo.

IDEAL MAMMOTH BRONZE PUREBRED GOLD bank, large boned, vigorous, prize-winning stock. Toms, $16—20; hens, $6—10. Mrs. W. S. Lorelle, Lamar, Colo.

MAMMOTH BRONZE HENS, 18 TO 20 LBS. each, $15; some June-hatched pullets, $12.50; toms, $15. Instructions on raising turkeys, curing crop disease, blackheads and cause of it, $1. Sunnydale Poultry Farm, Wm. A. Draves, Prop., Kearney, Nebr.

DUCKS AND GEESE.

MAMMOTH PEKIN DUCKS, $1.50; DRAKES, $2. Harold McWilliams, Hillsdale, Wyo.

TOULOUSE GEESE AND GANDERS, $4; TWO year-old trio, $12. P. J. Meng, Keenesburg, Colo.

WHITE PEKIN DRAKES, 9 LBS., $2; FANCY geese, 16 lbs., $3. Charles Sigle, Lucas, Kan.

MISCELLANEOUS.

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NEED CHICKEN COOPS? WE LOAN THEM TO you free and pay you top market for your poultry. The Rhodes Ranch Egg Co., Denver, Colo.

STANDARD CHEMICAL PRODUCTS CO. PRODucts for poultry; Standard Poultry Spray, Standard Poultry Germ Fluid for diseases, and Standard Poultry Powder. Recommended by many who are using them; only sold through representatives of State Poultry Association, who will call on you in time. Standard Chemical Products Co., Denver, Colo.

LIVE STOCK

CATTLE.

FOR SALE—REGISTERED GUERNSEY BULL, 4 years old. Alfred Vernoy, Las Animas, Colo.

FOR SALE—REGISTERED RED POLLED CATtle; breeding stock, beef and milk. W. A. Hobson, Swallows, Colo.

RANGE BULLS—REGISTERED HEREFORDS and Shorthorns. The Lowell Purebred Cattle Co., Union Stock Yards, Denver.

WHY PAY MORE? PUREBRED REGISTERED Holstein heifer calves, $50. Circulars free. Condon's Holstein Parks, West Chester, Ohio.

FOR SALE—TWENTY HEAD OF HIGH-GRADE Milking Shorthorn cows, bred to and sired by registered bulls. Also one 2-year-old registered Milking Shorthorn bull. V. T. Wyatt, Sedalia, Colo.

FOR SALE—FIVE-MONTHS-OLD PURE AND well bred Holstein Friesian bull calf; from a 40-pound bull and a real cow. See calf and dam at Fairhill Farm, South Federal Blvd. Entrance just north Loretto Academy. Phone Eng. 151. W. F. Norris, Route 6, Box 117, Denver, Colo.

HOGS.

BIG-TYPE POLAND CHINAS, BOTH SEXES, ALL ages. Write for prices and breeding. Gad Barney, Haswell, Colo.

FIRST-CLASS REGISTERED HAMPSHIRES, Poland Chinas, and Chester Whites; boars and gilts; also White Wyandottes. Dyke Smith, Fleming, Colo.

MILCH GOATS.

SWISS MILCH GOATS, HIGH-GRADE STOCK; milking from three to five quarts; also young stock. Frank Rauchfuss, R. D., Edgewater, Colo.

HELP WANTED

RAILWAY MAIL CLERKS, GOV'T CLERKS AND carriers needed; $1,500—$2,400; experience unnecessary. Particulars free. Write Mokane, Dept. B-11, Denver, Colo.

MEN AND WOMEN TO SELL BANNER BRUSHES direct to home; good pay; exlusive territory, permanent work. The Banner Brush Co., 1810 Blake St., Denver, Colo.

EARN $110 TO $250 MONTHLY, EXPENSES paid, as Railway Traffic Inspector. Position guaranteed after three months' spare time study or money refunded. Excellent opportunities. Write for free Booklet G-142. Stand. Business Training Inst., Buffalo, N. Y.

AMBITIOUS MEN—WRITE TODAY FOR ATtractive proposition, selling subscriptions to America's most popular automobile and sportsman's magazines. Quick sales. Big profits. Pleasant work. Digest Publishing Co., 9659 Butler Bldg., Cincinnati, Ohio.

YOU ARE WANTED—$100 TO $195 MONTH—U. S. Government positions. Men—women over 17. Steady work; no strikes; life positions; short hours; pleasant work; common education sufficient; experience unnecessary. List positions free. Write Franklin Institute, Dept. L 123, Rochester, N. Y.

FARMS AND RANCHES

CASH BUYERS WANT FARMS AND RANCHES for spring. May I sell yours? R. A. McNown, 334 Wilkinson Bldg., Omaha, Nebr.

EXTRA CHOICE 120, $11,500; FINE LOCAtion; schools, churches; terms. Deal with owner. George Wortham, Worland, Wyo.

WANTED—TO HEAR FROM OWNER OF GOOD ranch for sale. State cash price, full particulars. D. F. Bush, Minneapolis, Minn.

SELL YOUR PROPERTY QUICKLY FOR CASH, no matter where located. Particulars free. Real Estate Salesman Co., Dept. 11, Lincoln, Neb.

WANTED—TO HEAR FROM OWNER HAVING farm for sale; give particulars and lowest price. John J. Black, 33rd Street, Chippewa Falls, Wis.

OWNERS OF FARMS AND RANCHES FOR SALE at real bargain prices, should write us; we have cash buyers. Central Land Bureau, New Franklin, Mo.

FOR SALE OR TRADE—240 ACRES, 160 ACRES in fall wheat, all fenced well. Fordson tractor, seeder, 2 disk plow, tandem disk harrow, 4-section drag harrow; $35 acre takes all. Now under oil lease; consider small place close to Denver. E. L. Spies, Branson, Colo.

GOOD HOME ON 43-ACRE FARM WITH TEAM, 10 cattle, 5 hogs, implements, hay, corn, fodder included, only ¾ mile village; healthful surroundings, 25 acres tillage, pasture, wood, timber; house with 28-foot piazza, barn, poultry house. Owner called away; $1,200 takes all, part cash. Details Page 8 Illus. Catalog 1,200 Bargains, copy free. Strout Farm Agency, 831 BA, New York Life Bldg., Kansas City, Mo.

AGED OWNER MUST SELL 318 ACRES WITH 10 horses, 10 cows, bull, 8 yearlings, 25 hogs, harnesses, vehicles, full implements, etc.; $3,300 income last year; delightful place to live; big money melons, potatoes, etc.; all tillable; 100 acre fields, 35 cow pasture, ample water, comfortable house, good barn, garage, stable, shop, etc. For quick sale, $8,900 gets all, part cash. Edw. I. Leland, Hugo, Colo.

198 ACRES, FURNISHED HOUSE, 15 CATTLE, team, hogs, 160 hens, tools, implements, crops, etc.; handy to town; productive fields, 40-cow pasture, woodland; fruit; good 2-story 6-room house, fireplace, piazza; barn, tenant houses, poultry houses; only $3,500 takes all, part cash. Details page 84, Catalog Farms 33 States. Strout Farm Agency, 831 BA, New York Life Bldg., Kansas City, Mo.

Colorado Wins in Grain Show.

Colorado winter wheat, raised and exhibited by John Howell of Montrose, took second place among all varieties of wheat at the International Hay and Grain Show at Chicago last week. This show has been a part of the International Livestock Exposition for several years. More than 300 samples of wheat were entered, selected from the best grain grown in the United States and Canada. The Colorado wheat ranked only a few points below the winner of the first place, a sample of Marquis spring wheat from Canada.

Howell's winning sample was black hulled Turkey red, weighing 64.1 pounds to the bushel. The Canadian sample weighed 64.2 pounds. Howell's wheat took first place in the hard red winter wheat competition against more than 100 entries. Second place was won by George Howell, also of Montrose. John Howell also took first place on white spring wheat and third place on Durum wheat, while George Howell took second place on white spring wheat and third place on hard red winter wheat.

Colorado exhibitors took thirty-six premiums on grain and seed at the show, including five firsts, six seconds and five thirds. In the corn contests for region six, which includes Colorado and other western states, Logan county exhibits took one first and three seconds. Fred Gothorpe of Proctor, Logan county, took first place on cow peas, and George Howell took first place on oats in region six. The following is a complete list of Colorado winners:

Hard Red Winter Wheat—John Howell, Montrose, 1st; George Howell, Montrose, 3rd; John J. Skinner, Fruita, 9th; Vern Cossey, Fleming, 19th.

White Spring Wheat—John Howell, 1st; George Howell, 2d.

Durum Wheat—John Howell, 3rd.

Ten Ears White Dent Corn, Region Six—George Hofman, Iliff, 2nd; George Hofmann, Jr., Iliff, 3rd; Paul Hofmann, Iliff, 4th; Fred Smith, Iliff, 5th.

Ten Ears Yellow Dent Corn, Region Six—E. H. Scheel, Dailey, 2nd; T. A. Oakley, Sterling, 3rd; J. L. Manifold, Haxtun, 4th; J. E. Morrison, Sterling, 5th.

Junior Corn Contest—Paul Hofmann, Iliff, 1st; Philbert Fay, Iliff, 2nd; Ellis Smith, Iliff, 3rd; Perry August, Sterling, 4th; Robert August, Sterling, 5th.

Two-rowed Barley—John Howell, 4th; George Howell, 7th.

Six-rowed Barley—John Howell, 5th; George Howell, 9th; Fred Gothorpe, Proctor, 15th.

Oats, Region Six—George Howell, 1st; John Howell, 2nd; Fred Gothorpe, 4th; J. E. Morrison, 5th; George Hofmann, 6th.

Rye—John Howell, 5th.

Kaffir—H. E. Farris, Atwood, 2nd.

Milo—A. P. Morgan, Sterling 9th.

Soy Beans, Regions Five and Six—A. J. Wixon, Peetz, 5th.

Cow Peas—Fred Gothorpe, 1st.

Sweet Clover—John Howell, 7th.

SEEDS

SWEET POTATOES—WRITE FOR PRICE. W. D. Hayman, Grand Junction, Colo.

SWEET CLOVER, $10 HUNDRED POUNDS; Alfalfa, $11; Red Clover, $18; Timothy, $7; Alsike and Timothy mixed, $5; Sudan, $12.50; Grimm Alfalfa, $35; Cane seed, $4; Orchard Grass, $12; Red Top, $12. Sacks free; your money back if not satisfied. Meier Seed Company, Salina, Kan.

LUMBER

FIR LUMBER, MILLWORK, RED CEDAR SHINgles, fence posts, from mills to you. Send bill for delivered prices. Lansdown, Box 909M, Everett, Wash.

MISCELLANEOUS

BEST PARCHMENT BUTTER WRAPPERS, 8x11, neatly printed, 100, 60c; additional 100, 40c. Home Specialty Co., Middleton, Idaho.

PATENTS—BOOKLET FREE. HIGHEST REFerences. Best results. Promptness assured. Send model or drawing for examination and opinion. Watson E. Coleman, Patent Attorney, 624 F St., Washington, D. C.

NEW CROP—FANCY PURE SUGAR CANE SYrup; simply delicious; not to be compared with store-bought kinds; attractive prices. You save the middlemen's profit. Large sample 10c. See it, taste it. My nineteenth season. Farmer Hamlett, Route D, Houston, Texas.

LET US TAN YOUR HIDE—COW AND HORSE hides for fur coats and robes. Cow and steer hides into harness or sole leather. Catalog on request. We repair and remodel worn furs; estimates furnished. The Crosby Frisian Fur Co., Rochester, N. Y.

NURSES TRAINING SCHOOL—PARK AVE. HOSpital, Denver, Colo., offers a thorough training to young women desirous of becoming professional nurses. This is a fully accredited school. Course is three years. During training students receive full maintenance, tuition and all uniforms; also money allowance of $6 per month to cover other hospital needs. Apply Supt. of Nurses, Park Ave. and Humboldt Sts., Denver, Colo.

TOBACCO.

TOBACCO — THREE-YEAR OLD KENTUCKY leaf; pay for tobacco and postage when received; 3 lbs. chewing, $1; 4 lbs. smoking, $1; 7 lbs. No. 2 smoking, $1. Kentucky Tobacco Assn., Hawesville, Ky.

TOBACCO—SELECT 3-YEAR OLD KENTUCKY leaf. Pay for tobacco and postage when received. Five lbs. smoking, $1.25; 5 lbs. chewing, $1.50. Farmers' Union, Hawesville, Ky.

NATURAL LEAF TOBACCO CHEWING, 5 LBS. $1.75; 10 lbs., $3; 20 lbs., $5. Smoking, 5 lbs., $1.25; 10 pounds, $2. Pay when received. Tobacco Growers' Union, Paducah, Ky.

HOMESPUN TOBACCO — CHEWING, 5 POUNDS, $1.75; 10 pounds, $3; 20 pounds, $5. Smoking, 5 pounds, $1.25; 10 pounds, $2; 20 pounds, $3.50. Send no money, pay when received. Co-Operative Tobacco Growers, Paducah, Ky.

International Is Record Show for Quality of Exhibits.

(Continued from Page 3.)

Springs did well where entered, winning second to the grand champion female of the show, with Pine Valley Hannah, a daughter of Master Sam. The Pine Valley herd was third with Master Sam in aged bulls, third on yearlings with Pine Valley Roscoe, and fourth with Pine Valley Douglas in bull calves.

Aberdeen Angus.

The Aberdeen Angus show was good throughout. Ames Plantation of Grand Junction, Tenn., won both group classes in bulls. Senior champion bull honors were won by I. L. Jones of Raymond, S. D., on Bar Marshall.

Car Lot Steers of High Quality.

The carlot steers are weeded out pretty thoroughly at Chicago so that the exhibit, while not large, is all of top quality animals. John Hubly, Mason City, Iowa, who has been so successful in the past two years with the N. L. Harrison Angus stock, formerly from Roggen, Colo., was first and champion again with steers of the same breeding. E. P. Hall of Mechanicsburg, Ill., showed reserve champion carload. He has shown every year but one at the International and has always been in the money, and frequently first and champion.

Show of Breeding Hogs Small.

Since the development of the National Swine Show the International hog show has lost somewhat in numbers. The barrow show was strong, but the breeding classes weak. Oklahoma A. & M. College won grand champion barrow on a Duroc, while Ames won champion pen on Polands. The champion carlot was won by Hampshires shown by Gus Meyer of Elwood, Ind.

In Duroc breeding classes, the grand champion boar was shown by Chesney Farms, Lake Villa, Ill., who won with Sensation Improver. Mahan & Neff of Osborne, Ohio, won grand champion sow with Miss Perfection 4th.

Average Horse Show, But of High Quality.

The Percherons were out in strong classes, though not in such large numbers as formerly. Rectorat was grand champion stallion. He won the championship two years ago in thin condition as a three-year-old, but came back this year in excellent shape. A three-year-old mare, Carnona V, by Carnot, was grand champion mare. The grand champion mare of last year's show, Maple Grove Carrie, then a yearling, headed her class, but was defeated for championship.

The Belgian classes were small owing to the absence of two strong exhibitors. Clydes and Shires showed in usual numbers.

Sheep Exhibits of Outstanding Merit.

One of the features of the sheep exhibit was the grand champion pen of Southdown lambs shown by Col. Robert McEwen & Son of London, Ontario, said to be the most even and well fitted load ever shown. This flock also had the champion single wether, a very blocky lamb, evenly and firmly fleshed. Reserve championship was won by University of Illinois on a Shropshire yearling.

The Shropshire show was one of the strongest ever staged and was remarkable not only for its high quality, but also for the fact that no imported sheep were shown, all being American bred. J. C. Andrew of West Point, Ind., won grand champion ram, and Fred Pabst of Oconomowoc, Wis., the grand champion ewe. A. Broughton & Sons of Albany, Wis., and Iroquois Farms of Cooperstown, N. Y., were heavy winners.

The Hampshire exhibit was small owing to the absence of some of the more prominent flocks. Thousand Springs Farm of Wendall, Idaho, won practically all firsts and championships. Robt. Taylor of Avina, Neb., and A. R. Hamilton of Johnstown, Pa., were consistent winners.

In Rambouillets, King Bros. of Laramie, Wyo., Bullard Bros. of Woodland, Calif., the University of Illinois, and Michigan Agricultural College were the main exhibitors. King got champion ram and Michigan Agricultural College the champion ewe. This is the first time that Bullard Bros. have shown so far East.

In Corriedale exhibit, King Bros. were first, the Corriedale Sheep Company of Hollister, Calif., second, and University of Illinois third.

The Southdown show was very strong

(Turn to Page 22.)

Dairying and Hog Raising

All letters regarding commercial and technical features of dairy farming and hog production promptly answered. Address all communications to Dairy Department, Western Farm Life, Denver, Colorado.

Sweet clover makes a good pasture for hogs.

For fattening hogs a self-feeder is more successful than the best methods of hand feeding.

A good dairy ration should contain at least two kinds of roughage and three kinds of grain.

The rule for figuring the value of buttermilk or skim milk is to count one-half the price of a bushel of corn as the value of 100 pounds of milk.

Getting Crude Oil.

For keeping hogs free from lice, particularly during cold weather, giving them an opportunity to oil themselves on a rubbing post is generally practiced by successul hogmen. Where and how to get the crude oil is a problem, however. One of our readers tells of a vain attempt to get oil through one of the big oil companies doing business in the mountain states. In the states to the east hogmen do not seem to find it so difficult to get the oil. Have any of our hog growers been able to obtain at a reasonable price suitable oil for giving the hogs the necessary shampoo to keep the lice in check? We would be glad to hear from any who have had experience in this line.

Hogs Give Quick Turnover.

No other farm animal has more regularly and consistently made money for livestock farmers than hogs. They reproduce in whole litters and come to maturity in a few months' time. That means a quick turnover. Of course, it also means that there can be a big increased production in a very short period of time, which sometimes means depressed prices and resulting losses. In no type of farm or livestock production, however, is the in-and-out policy a safe one to follow. The safer plan is to keep up a fairly uniform production without plunging in any one thing at any time. There are some very definite reasons for the results obtained by those who have consistently stuck to hogs. There is always some sort of a market for pork. Pork produced on the farms is to a considerable extent a by-product. This is particularly true on farms where dairying is carried on or cattle fed. The hog offers a quick return on the money invested, which need not be a large amount. The hog produces more marketable meat in proportion to the amount of feed consumed than any other kind of farm animal. On the livestock farm there is always a place for a few hogs for the reasons enumerated.

Butcher the Cull Cow.

In almost any dairy herd will be found a cow or two making little or no return for the feed consumed—culls which constitute the largest single factor in keeping down the profits of the dairy business. Cow testing association members locate their culls sooner or later and it then becomes a matter of how to stop these leaks in the business. To know and not to act is the height of indiscretion.

Some men who do not look very far ahead adopt the policy of selling the culls to a neighbor. This makes enemies, undermines a man's reputation and is a practice lacking in that spirit of co-operation which is necessary to build Colorado into a great dairy state.

To sell the culls to the butcher is the sensible method of disposal. Culls can be sold to the butcher almost immediately, while if a man keeps a cull on his place several months waiting for some sucker to bite, he will loose as much money waiting as he will realize after the sale is made, as well as losing his reputation for reliability, which is the basis for future business.

Any milk cow that is not making a return for her care and feed should be classed as a cull. Many a cow will produce a small margin of profit above feed cost, and still be a cull. One must value his labor as in all other businesses, and certainly no man in his right senses wants to work for nothing. Now is the time to kill those boarder cows. Now is the time to take the butcher money from two or three cull cows and turn around and buy one good cow with it. Don't wait, thinking you will get a higher price at the butcher's next spring, or that some sucker will come and buy your culls. Stop the leaks in your business now. A cull is a loss to you every day she is on your place. A good cow is a profit and a delight to her owner.—H. R. Lascelles, Fieldman, State Dairy Commission.

Dairy Cows Don't Like Ice Water.

Although human beings drink large quantities of ice water in summer, we do not care for it in winter. Cows get ice water only during the winter and they do not like it then any more than we do. Cows producing milk require large quantities of water and they will reduce the milk rather than drink ice water which is too often all that is supplied to them. Water stored in tanks for cows in cold weather should be warmed with a tank heater. These are made to burn coal, wood or corncobs. If only one or two milk cows are to be watered a teakettle of boiling water will take the chill off the half barrel of water required.

Litters Too Small.

Of four registered Poland China gilts farrowing for me last spring, one had but three pigs and raised one, another had four and raised two, one had seven and raised six, and one did not raise a pig. I thought perhaps they had been kept too fat by the man from whom I purchased them and tried reducing them in flesh for the fall litters. The sow farrowing seven in her first litter had ten, but raised only four. The rest were little sickly things when they came. The other sows had from three to five pigs each and only raised one or two each. The pigs that lived were big and had black shiny hair, while the rest were little sickly things and their hair was a dull black. I have bought my last three boars from this same breeder and thought perhaps they might have been too closely related to the sows. I fed wheat slop, carrots, beets and weeds to these sows and they have had plenty of fresh water. I did everything I could for them, building a new house and cleaning it out thoroughly in the fall. The sows are all gentle and easy to handle.—A. B. K., Idaho.

Breeders usually do not reject young sows because they fail to come up to expectations with their first litters. It quite often happens that a gilt develops and becomes a much better producer than her first litter might indicate. Perhaps you overdid the matter of reducing these sows in flesh for the second litter. A brood sow should come to farrowing in fairly high condition, but should have had plenty of exercise and a ration that is properly balanced.

It is quite often necessary to force sows to take the desired amount of exercise. Some breeders scatter oats on the feeding platform or clean ground so they will have to be on their feet for some time gathering up the grain. Having the sleeping quarters at some distance from the feeding place will encourage exercise. One of the best possible ways of bringing sows up to farrowing time in vigorous condition is to give them free access to good quality alfalfa hay. It is astonishing how much alfalfa hay sows will eat. Of course, some grain is required in addition to carry sows to farrowing time in proper condition.

If you have these sows bred for spring litters, try bringing them through to farrowing in fairly good condition, but handle them in such a way as to ensure their getting plenty of exercise and if at all possible give them all the alfalfa hay they will eat. Of course, brood sows that fail to come up to a reasonable standard of production are not profitable to keep and it may be that these sows simply do not have it in them to bring large thrifty litters.—G. C. W.

Skim Milk for Calves.

What is the value of skim milk for calves?—H. D., Adams county, Colo.

Skim milk can be very successfully used in raising calves, but it must be properly supplemented with grain. When the cream or butterfat has been removed from the milk it becomes an unbalanced feed for the young calf. The skim milk, however, contains all of the protein and likewise the carbohydrates in the form of milk sugar. To properly balance it the calves must have some grain feed rich in starch and fat, as corn, oats or barley, as soon as they are able to digest these starchy grains, which usually is when they are four or five weeks old.

Calves will begin to eat a little grain when they are two weeks old if they are encouraged to do so. These grains supply the nutrients which take the place of the butterfat removed from the milk by the separator. The calves must have whole milk until they are able to digest the starchy grains, therefore the change to skim milk should not be made until they are about four weeks old. This change should be made gradually, adding a pint or so of skim milk each day and lessening the amount of whole milk until they are receiving nothing but skim milk. At the same time they should be encouraged to eat grain. This can often be brought about by putting a little meal in the bottom of the bucket when they have finished the milk, or throwing a handful of the meal into their mouths so they will get the taste of it. As soon as they have acquired the taste for grain it generally will be best to feed shelled corn or whole oats to which a little bran might be added. Chewing the whole grain insures its more perfect digestion. It is not a good plan to put ground feed into the milk for the calves will swallow it without chewing and it will be poorly digested and often digestive troubles will result.

A calf at six weeks of age being raised on skim milk usually will eat about a half pound of grain a day; when two months old a pound a day, and when three months old two pounds. Unless you are anxious to push the calves very rapidly it is not necessary to feed more than two pounds a day from this time on. The grain allowance should be fed in clean feed boxes after the calves have finished their milk. They also should have access to clean bright hay when quite young and have fresh water. For young calves on skim milk wild hay is better than alfalfa hay.—G. C. W.

Wyoming Pig Club Record.

In the two years that little Marie Ganguet of Park county, Wyoming, has been a pig club member, she has made $275 and has twelve well-bred pigs left. The pig club Marie joined was organized by County Agent Allen. She purchased a registered Duroc Jersey gilt from the herd of the Edwards Ranch Company at Emblem, Wyo. She started with the determination to make her work a success. The pig was only four months old and weighed 60 pounds when purchased. Five months later, Miss Ganguet exhibited this gilt, which she had named Constellation Wonder Lady, at the Park County Fair and won second place.

Wonder Lady soon set a record for

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northern Wyoming and thus made her little owner a club champion. She has produced forty-seven baby pigs in two years from three farrowings. Of the first litter of thirteen, all lived except two, which were smothered by the mother pig; all of the next litter of sixteen lived; and seventeen of the eighteen born in the last litter survived.

The first winter that Marie was in the pig club she built a hog house costing $150 and later paid for it with the money which she received from the sale of the second litter.

Marie became the state pig club champion when she was only eleven years old. At her present rate of progress in hog raising she will in a few years become an authority on the subject in addition to having a nice bank account.—Agnes W. Spring.

International Is Record Show for Quality of Exhibits.

(Continued from Page 20.)

and the long wool classes were well filled.

Intercollegiate Stock Judging Contest.

Twenty teams from the United States and Canada staged a hard-fought contest on Saturday preceding the show. Iowa won first, the same team having won first at the National Swine Show this fall and third at Kansas City Royal. The scores of the teams were as follows: Iowa, 3,970; Purdue, 3,893; Kansas, 3,859; Nebraska, 3,853; Texas, 3,832; Oklahoma, 3,781; Minnesota, 3,777; North Dakota, 3,775; Illinois, 3,763; South Dakota, 3,753; Kentucky, 3,750; Missouri, 3,735; Ohio, 3,730; Colorado, 3,713; Ontario, 3,680; Wisconsin, 3,696; West Virginia, 3,583; Michigan, 3,572; Pennsylvania, 3,515; McDonald, Quebec, 3,441.

Colorado placed fourteenth, between the two high colleges of last year's contest—Ohio and Ontario. The Colorado team stood second to the swine show champions on the swine classes, winning $18 prize money offered by the American Poland China Record Association. This success is due largely to the fact that the college has strong prize-winning herds of Duroc and Polands, and also to the coaching on type given by Robert Broad, chief herdsman.

The Colorado team was made up of W. D. Dersham, North Denver (fourteenth high man); Aman Hall, Canon City (thirty-third high man); O. O. Waggener, Berthoud (forty-second); W. F. Dickson, Fort Collins, and A. Miller of Elizabeth. Chas. Flint of Cedar Edge was alternate. The Colorado team stood eighth on cattle judging, though on points they were nearer the first team than in the hog classes. Dersham was eighth high man on sheep judging and Hall ninth on Hogs.

Colorado Canning Team Wins Trip to Europe.

The Colorado State Canning Club representatives, Elaine Hendricks and Bertha Roger, coached by Miss Maude Sheridan, state club leader, won second in the contest in canning demonstrations and will be given a three months' trip to Europe along with the winning team from Iowa. They will leave June 1 for France, where they will give canning demonstrations for five weeks, and then will visit other parts of Europe before returning home.

Mrs. Douglas Buys Shirley Farms

Mrs. R. G. Douglas, a well-known breeder of Holstein cattle, of Rush, Colo., recently purchased the Shirley Farms, Fort Logan, and has moved her herd of Holsteins to that place. They report having just completed two more state records, one senior 2-year-old, 305-day division, 17,000 pounds of milk, 670 pounds butterfat. The other a senior 2-year-old in the 365-day division, with 17,050 pounds milk and 850 pounds of butterfat.

Jargon of the Sheep Barns.

Like all the rest the sheep market has a little language all its own. For example: "Mutton sheep" are mature ewes and wethers fat enough for slaughter. "Choppers" are aged ewes which are not fat, but in medium flesh whose carcasses, presumably are good enough to produce mutton chops. "Docked lambs" have had their tails cut off. Those which have not been docked generally come to market with their tails badly gummed up, a condition which [illegible] the sale. Docking is universal on the range, but cornbelt farmers often [illegible] the operation, which is one reason why range lambs generally outsell [illegible]. "Peewees" are small, unfinished lambs often thrown out of loads of fat lambs. Many of them are late born lambs. "Hot house lambs" are those born out of season so that they can be marketed while still quite young anywhere from Christmas time to Easter. They seldom come upon the open market. "Spring lambs" are those born in the spring and sold in the regular way. After June 15 or July 1, the term "spring" is generally dropped. "Aged lambs" are those born in the spring of the previous year but marketed after "spring" lambs are available. They are classed as yearlings on most markets after June 15 or July 1.

Montanas, Wyomings and Idahoes are names indicating the state of origin. "Mexicans" come originally from Mexico or New Mexico but generally they have been fattened in Colorado or an adjacent state. They are not good mutton types, but are high dressers and sell exceptionally well. "Light lambs" are those weighing around 75 pounds or less. "Handyweights" are those weighing 75 to 85 pounds. "Break joint" is not a true joint, but in dressing the carcass of lambs and most wethers less than two years old the leg can be broken at a point about a half inch above the pastern joint. The "break joint" has a sawtooth appearance and the housewife who can recognize it can make sure that she is not given mutton when she asks for lamb. Naturally the leg is broken in this way whenever possible. A "breaker end" refers to a small part of a load of mature sheep which probably can be made to show this sign of youth.

Public Schools Objectives.

The American public school has grown piecemeal as the country has been built up, but has not kept pace with the vast sweep of progress that has been made in science, industry, and agriculture. It it no criticism of the great constructive accomplishments of education to recogize frankly its shortcomings and deficiencies. Our educational system can not be considered adequate until it has obliterated illiteracy and welded our people into one great composite American citizenry with common ideals and purposes; until it has laid the foundation for right living, for health and physical vigor; and until it has provided for every American child a competent and well-trained teacher.—William B. Owen, President of the Chicago Normal College and of the National Educational Association.

Tangled Trails.

(Continued from Page 19.)

three drinks. He was mellow. "Oh, I'm wise," he said with a wink. "Chuck Ellis isn't anybody's fool. Beat it, Lothario, while the beating's good." The last sentence and the gesture that accompanied the words were humorous exaggerations of old-time melodrama.

Lane took his advice without delay.

CHAPTER IX.

The Story in The "News."

From a booth in a drug store on Sixteenth street Kirby telephoned the police that James Cunningham had been murdered at his home in the Paradox Apartments. He stayed to answer no questions, but hung up at once. From a side door of the store he stepped out to Welton street and walked to his hotel.

He passed a wretched night. The distress that flooded his mind was due less to his own danger than to his anxiety for Rose. His course of action was not at all clear to him in case he should be identified as the man who had been seen going to and coming from the apartment of the murdered man. He could not explain why he was there without implicating Rose and her sister. He would not betray them. That of course. But he had told his cousins why he was going. Would their story not start a hunt for the woman in the case?

Man is an illogical biped. Before Kirby had seen the glove on the table and associated it with the crime, his feeling had been that the gallows was the proper end of so cruel a murderer. Now he not only intended to protect Rose, but his heart was filled with pity for her. He understood her better than he did any other woman, her loyalty and love and swift, upblazing anger. Even if her hand had fired the shot, he told himself, it was not Wild Rose who had done it—not the little friend he had come to know and like so well, but a tortured woman beside herself with grief for the sister to whom she had always been a mother too.

He slept little, and that brokenly. With the dawn he was out on the street to buy a copy of the "News." The story of the murder had the two columns on the right-hand side of the front page and broke over to the third. He hurried back to his room to read it behind a locked door.

The story was of a kind in which newspapers revel. Cunningham was a well-known character, several times a millionaire. His death even by illness would have been worth a column. But the horrible and grewsome way of his taking off, the mystery surrounding it, the absence of any apparent motive unless it were revenge, all whetted the appetite of the editors. It was a big "story," one that would run for many days, and the "News" played it strong.

As Kirby had expected, he was selected as the probable assassin. A reporter had interviewed Mr. and Mrs. Cass Hull, who occupied the apartment just below that of the murdered man. They had told him that a young man, a stranger to them, powerfully built and dressed like a prosperous ranchman, had knocked on their door at about 9:20 to ask the way to the apartment of Cunningham. Hull explained that he remembered the time particularly because he happened to be winding the clock at the moment.

A description of Lane was given in a two-column "box." He read it with no amusement. It was too deadly accurate for comfort.

> The supposed assassin of James Cunningham is described by Mrs. Cass Hull as dressed in a pepper-and-salt suit and a white, pinched-in cattleman's hat. He is about 6 feet tall, between 25 and 30 years old, weighing about 200 or perhaps 210 pounds. His hair is a light brown and his face tanned from the sun.

His age and weight were overstated, and his clothes were almost a khaki brown. Otherwise Mrs. Hull had given a very close description of him, considering her state of mind at the moment when she had seen him.

There was one sentence of the story he read over two or three times. Hull and his wife agreed that it was about 9:20 when he had knocked on their door, unless it was a printer's copy error or the reporter had made a mistake. Kirby knew this was wrong. He had looked at his watch just before he had entered the Paradox Apartment. He had stopped directly under a street globe, and the time was 9:55.

Had the Hulls deliberately shifted the time back thirty-five minutes? If so, why? He remembered how stark terror had stared out of both their faces. Did they know more about the murder than they pretended? When he had mentioned his uncle's name the woman had been close to collapse, though, of course, he could not be sure that had been the reason. To his mind there flashed the memory of the note he had seen on the table. The man had called on Cunningham and left word he might call again. Was it possible the Hulls had just come down from the apartment above when he had knocked on their door? If so, how did the presence of Rose fit into the schedule?

Lane pounced on the fear and the evasion of the Hulls as an out for Wild Rose. It was only a morsel of hope, but he made the most of it.

The newspaper was inclined to bring up stage the mysterious man who had called up the police at 10:25 to tell them that Cunningham had been murdered in his rooms. Who was this man? Could he be the murderer? If so, why should he telephone the police and start immediately the hunt after him? If not the killer, how did he know that a crime had been committed less than an hour before?

As soon as he had eaten breakfast, Kirby walked round to the boarding-house on Cherokee street where Wild Rose was staying with her sister. Rose was out, he learned from the landlady. He asked if he might see her sister. His anxiety was so great he could not leave without a word of her.

Presently Esther came down to the parlor where the young man waited for her. Lane introduced himself as a friend of Rose. He was worried about her, he said. She seemed to him in a highly wrought-up, nervous state. He wondered if it would not be well to get her out of Denver.

Esther swallowed a lump in her throat. She had never seen Rose so jumpy, she agreed. Last night she had gone out for an hour alone. The look in her eyes when she had come back had frightened Esther. She had gone at once to her bedroom and locked the door, but her sister had heard her moving about for hours.

Then, suddenly, Esther's throat swelled and she began to sob. She knew well enough that she was at the bottom of Wild Rose's worries.

"Where is she now?" asked Kirby gently.

"I don't know. She didn't tell me where she was going. There's—there's something queer about her. I—I'm afraid."

"What are you afraid of?"

"She's so—so kinda fierce," Esther wailed.

It was impossible to explain, even to this big brown friend of Rose who looked as though his quiet strength could move mountains. He was a man. Besides, every instinct in her drove her to keep hidden the secret that some day would tell itself.

Her eyes fell. They rested on the "News" some boarder had tossed on the table beside which she stood. Her thoughts were of herself and the plight in which she had become involved. She looked at the big headlines of the paper and for the moment did not see them. What she did see was disgrace, the shipwreck of the young life she loved so much.

Her pupils dilated. The words of the headline penetrated to the brain. A hand clutched at her heart. She read again hazily—

JAMES CUNNINGHAM MURDERED

—then collapsed fainting into a chair.

CHAPTER X.

Kirby Asks a Direct Question.

The story of the Cunningham mystery, as it was already being called, filled the early editions of the afternoon papers. The "Times" had the scoop of the day. It was a story signed by Chuck Ellis, who had seen the alleged murderer climb down by a fire escape from the window of Cunningham's bedroom and had actually talked with the man as he emerged from the alley. His description of the suspect tallied fairly closely with that of Mrs. Hull, but it corrected errors in regard to weight, age, and color of clothes.

As Kirby walked to the Equitable Building to keep his appointment with his cousins, it would not have surprised him if any moment an officer had touched him on the shoulder and told him he was under arrest.

Entering the office of the oil broker, where the two brothers were waiting for him, Kirby had a sense of an interrupted conversation. They had been talking about him, he guessed. The atmosphere was electric.

James spoke quickly, to bridge any embarrassment. "This is a dreadful thing about Uncle James. I've never been so shocked before in my life. The crime was absolutely fiendish."

Kirby nodded. "Or else the deed of some insane person. Men in their right senses don't do such things."

"No," agreed James. "Murder's one thing. Such coldblooded deviltry is quite another. There may be insanity connected with it. But one thing is sure. I'll not rest till the villain's run to earth and punished."

His eyes met those of his cousin. They were cold and bleak.

"Do you think I did it?" asked Kirby quietly.

The directness of the question took James aback. After the fraction of a second's hesitation he spoke. "If I did I wouldn't be going to lunch with you."

Jack cut in. Excitement had banished his usual almost insolent indolence. His dark eyes burned with a consuming fire. "Let's put our cards on the table. We think you're the man the police are looking for—the one described in the papers."

"What makes you think that?"

"You told us you were going to see him as soon as he got back from the Springs. The description fits you to a T. You can't get away with an alibi so far as I'm concerned."

"All right," said the rough rider, his low, even voice unruffled by excitement. "If I can't, I can't. We'll say I'm the man who came down the fire escape. What then?"

James was watching his cousin steadily. The pupils of his eyes narrowed. He took the answer out of his brother's mouth. "Then we think you probably know something about this mystery that you'll want to tell us. You must have been on the spot very soon after the murderer escaped. Perhaps you saw him."

Kirby told the story of his night's adventure, omitting any reference whatever to Wild Rose or to anybody else in the apartment when he entered.

After he had finished, James made his comment. ' 'You've been very frank, Kirby. I accept your story. A guilty man would have denied being in the apartment, or he would have left town and disappeared."

The range rider smiled sardonically. "I'm not so sure of that. You've got the goods on me. I can't deny I'm the man the police are lookin' for. Mrs. Hull would identify me. So would this reporter Ellis. All you would have to do would be to hand my name to the nearest officer. An' I can't run away without confessin' guilt. Even if I had killed Uncle James, I couldn't do much else except tell some story like the one I've told you."

"It wouldn't go far in a courtroom," Jack said.

"No far," admitted Kirby. "By the way, you haven't expressed an opinion, Jack. Do you think I shot Uncle James?"

Jack looked at him, almost sullenly, and looked away. He poked at the corner of the desk with the ferrule of his cane. "I don't know who shot him. You had quarreled with him, and you went to have another row with him. A cop told me that some one who knew how to tie ropes fastened the knots around his arms and throat. You beat it from the room by the fire escape. A jury would hang you high as Haman on that evidence. Damn it, there's a bad bruise on your chin wasn't there when we saw you yesterday. For all I know he may have done it before you put him out."

"I struck against a corner in the darkness," Kirby said.

"That's what you say. You've got to explain it somehow. I think your story's fishy, if you ask me."

"Then you'd better call up the police," suggested Lane.

"I didn't say I was going to call the cops," retorted Jack sulkily.

James looked at his cousin. Kirby Lane was strong. You could not deny his strength, audacious yet patient. He was a forty-horsepower man with the smile of a boy. Moreover, his face was a certificate of manhood. It was a recommendation more effective than words.

"I think you're wrong, Jack," the older brother said. "Kirby had no more to do with this than I had."

"Thanks," Kirby nodded.

"Let's investigate this man Hull. What Kirby says fits in with what you saw a couple of evenings ago, Jack. I'm assuming he's the same man Uncle flung downstairs. Uncle told you he was a blackmailer. There's one lead. Let's follow it."

Reluctantly Kirby broached one angle of the subject that must be faced. "What about this girl in Uncle's office—the one in trouble? Are we goin' to bring her into this?"

There was a moment's silence. Jack's black eyes slid from Lane to his brother. It struck Kirby that he was waiting tensely for the decision of James, though the reason for his anxiety was not apparent.

James gave the matter consideration, then spoke judicially. "Better leave her out of it. No need to smirch Uncle's reputation unless it's absolutely necessary. We don't want the newspapers gloating over any more scandals than they need.

The cattleman breathed freer. He had an odd feeling that Jack,, too, was relieved. Had the young man, after all, a warmer feeling for his dead uncle's reputation than he had given him credit for?

As the three cousins stepped out of the Equitable Building to Stout street a newsboy was calling an extra.

"A-l- 'bout Cunn'n'ham myst'ry. Huxtry! Huxtry!"

Kirby bought a paper. A streamer headline in red flashed at him:

HORIKAWA, VALET OF CUNNINGHAM, DISAPPEARS.

The lead of the story below was to the effect that Cunningham had drawn two thousand dollars in large bills from the bank the day of his death. Horikawa could not be found, and the police had a theory that he had killed and robbed his master for this money.

(To be continued.)

Market Outlook for Farm and Ranch Products.

(Continued from Page 6).

markets in the last four months has been 50 per cent greater than in the corresponding period of 1921. The Canadian oats crop is estimated at 513,033,000 bushels, compared with 426,232,000 bushels last year and a record crop of 530,709,000 bushels in 1920.

Feed Markets Firm.

Strong grain markets and a fair demand are supporting the feed market. Shipments of wheat feeds are rather heavy and offerings are increasing as production is above the average. Stocks of cottonseed meal and cake at mills are fairly generous, but of linseed meal are light.

Kansas City—Bran, $22.25@22.50; standard middlings, $24@24.50; flour middlings, $26.

Hay Practically Steady.

Hay prices were practically steady last week, although alfalfa at Kansas City and prairie hay in the Northwest eased slightly. Prices per ton in carlots:

Kansas City—Prairie upland No. 1, $13.50@14; No. 2, $11.50@13; alfalfa choice, $25@25.50; No. 1, $23@24.50; standard, $19.50@22.50; No. 2, $16.50@19; No. 1 timothy, $16@16.50; No. 2, $13@14; No. 1 light clover mixed, $15.50; No. 1 clover-mixed, $13@14.50; straw, $9@9.50.

Egg Market Working Lower.

Egg prices recovered part of their loss after the first sharp break of the season, but the market has turned easy again and the trend seems to be downward. After the middle of December, as a rule, receipts begin to increase more or less and reports from the country to egg dealers point to a larger supply before long. Consumptive demand is broad, as the apparent disappearance of eggs from the four leading markets during November totalled 1,575,040 cases, compared with 1,360,862 cases in the same month of 1921. Storage holdings remain large, although the reduction at the four leading markets during November was 29 per cent above the average for that month in the preceding four years. If the reduction at other points was proportionately heavy, holdings on December 1 in the entire United States would be about 3,350,000 cases. Latest quotations:

Kansas City:Eggs, firsts, 45c; seconds, 26c. Live poultry—Broilers, 22c; springs, 17c; heavy hens, 17c; light hens, 12c; roosters, 10c; turkeys, 38c; ducks, 15c; geese, 15c.

Denver—Eggs, 33@37c. Live poultry—Hens, 10@15c; springs, 15@16c; roosters, 7c; turkeys, 25@30c.

Butter Prices Near Top.

Butter prices at Chicago advanced further last week, while eastern points held practically steady, putting the former out of line. In general, conditions indicate that further advances of any consequence are unlikely. The decline in production seems to have been checked and even if it extends still further, the loss in consumption as a result of high prices and increased competition from foreign butter will limit advances. Eastern markets, particularlyy, were affected by actual and prospective imports. Nearly 1,000 casks of Danish arrived at New York and another shipment containing several thousand casks cleared a week ago. The Danish market at the present time is about 3 cents below the American level duty paid. A small quantity of Canadian butter continues to arrive at New York and California butter also is rolling eastward. Purchase of several million pounds of New Zealand butter to be shipped before January 10 was reported, and whether correct or not, New Zealand prices are low enough to make such sales possible. Argentine butter, also, is said to be coming in this direction.

In spite of the reported decrease in consumption as a result of high prices, nearly as much butter disappeared from the four leading markets in November as in October. Based on the reserve at the four markets, storage holdings on December 1 in the entire United States would be slightly below 50,000,000 pounds, or the smallest ever reported on that date and only two-thirds of the average.

Prices on 92-store fresh butter on December 2 were:

Chicago, 55c; New York, 53c; Boston, 52c; Philadelphia, 54c.

Fruits and Vegetables.

The market for northern white potatoes has been generally steady during the past week. Total shipments from producing sections are running about 4,000 cars weekly, which is practically normal for this season of the year. Five or six weeks ago they were over 8,000 cars weekly. Unloads at the leading consuming markets have not fallen off so sharply, as th e car situation resulted in many delays in transit. During the next month the movement should decline 25 to 50 per cent further, so that some recovery from extremely low prices prevailing seems inevitable. That they will not go lower is quite certain. Northern sacked round whites are quoted at 75 to 90 cents in the Chicago carlot market, and $1 to $1.15 in most other consuming centers.

Carlot shipments of boxed apples up to November 18 totalled 22,189 cars, compared with 40,819 cars to the corresponding date last year, while barreled apple shipments were 41,282 cars, compared with 24,043 cars a year ago.

Apple markets were steady at Chicago last week and slightly easier in the East. New York Baldwins were quoted at $4.25 to $5 in leading markets, and $3.75 to $4 f. o. b. shipping points.

LIVESTOCK NOTES.

(C. N. Henry, Fieldman.)

J. H. Brown of Selden, Kan., will hold a public sale of Poland China hogs at Oberlin, Kan., January 27. He will offer forty head, consisting of bred sows and spring gilts. Mr. Brown's herd is headed by Giant Bob Wonder, weight over 1,200 pounds in market condition. This is Mr. Brown's eleventh sale at Oberlin, Kan.; he has shipped breeding stock to over half of the states. This fall his herd at Norton and Decatur, Kan., county fairs won five firsts, three champions, and two grand champions and sweepstakes. Many Colorado breeders have purchased their foundation stock at the Brown sales. See special announcement for January sale in this issue.

Pine Valley Dairy & Farms Company of Colorado Springs reports winning nine money prizes at the International Stock Show in Chicago. Mr. Seeley G. Rose, manager, feels very much elated over the good showing made by their Milking Shorthorn exhibits, many of them the offspring of their chief herd bull, Master Sam. The competition at Chicago is the strongest of any show of its kind in this country. Champions and winners from country.

Modest King, the two-year-old Shorthorn bull shown by the Maxwell-Miller Cattle Company of Littleton, stood at the top of the class at Chicago. This came as high honor, for he had made only fourth place at Kansas City under a different judge.

Colorado Mixer, the Hereford steer shown by George W. Baker of Littleton, following his winning of the Hereford steer championship at Kansas City, fought his way to second place in his class in Chicago in the greatest fat stock show held in this country.

Recent Range of Livestock Prices at Our Principal Markets.

Cattle—	Denver.	Kansas City	Omaha.
Medium heavy steers	$ 7.00@ 7.50	$6.60@ 9.50	$6.50@ 8.75
Common heavy steers	4.75@ 7.00	4.90@ 7.10	4.75@ 6.75
Medium light steers	6.75@ 7.50	6.40@ 9.10	6.25@ 8.75
Common light steers	4.50@ 6.75	4.50@ 6.90	4.50@ 6.50
Common to choice butcher heifers	3.75@ 5.75	4.00@ 8.40	3.75@ 9.00
Common to choice butcher cows	3.50@ 5.00	3.75@ 6.00	3.75@ 6.25
Bologna and beef bulls	1.50@ 3.00	3.10@ 5.25	3.00@ 6.00
Canners and cutters, cows and heifers	2.50@ 3.50	2.50@ 3.75	2.50@ 3.50
Canner Steers	2.75@ 3.75	2.75@ 3.75	2.50@ 4.00
Medium to choice light veals	6.00@ 8.00	5.25@ 8.25	6.50@ 8.00
Common to choice heavy veals	3.50@ 6.00	3.25@ 6.50	4.00@ 6.50
Common to choice feeders (1000 lb. up)	4.75@ 7.00	4.90@ 7.85	5.25@ 7.40
Common to choice feeders (750-1,000 lb.)	4.75@ 7.00	4.85@ 7.85	5.00@ 7.40
Common to choice stocker steers	4.00@ 6.75	4.00@ 7.85	4.50@ 7.60
Common to choice stocker cows and heifers	2.00@ 4.00	2.65@ 5.50	3.00@ 5.25
Hogs—			
Top of Market	$ 8.10	$ 8.40	$ 8.25
Bulk of Sales	7.50@ 7.75	7.95@ 8.35	7.15@ 8.20
Heavy (250 lb. up)	7.40@ 7.75	7.75@ 8.35	7.45@ 8.25
Medium (200—250 lbs.)	7.50@ 8.00	7.90@ 8.40	7.50@ 8.25
Light (150—200 lb.)	7.75@ 8.10	7.80@ 8.35	7.40@ 8.20
Light Lights (130-150 lb.)	7.50@ 8.00	7.70@ 8.30	.....
Smooth packing sows (250 lb. up)	6.25@ 6.75	7.15@ 7.60	6.90@ 7.80
Rough packing sows (200 lbs. up)	6.00@ 6.25	6.90@ 7.40	6.75@ 7.60
Medium to choice pigs (130 lb. down	6.50@ 7.00	.....	.....
Stock pigs	6.50@ 7.25	7.40@ 8.15	6.50@ 8.00
Sheep and Lambs—			
Medium and prime lambs 84 lb. down)	$12.00@13.50	$12.50@14.40	$12.50@14.25
Culls and common lambs	9.00@12.00	8.50@12.50	8.75@13.00
Medium to choice ewes	4.50@ 6.25	5.00@ 7.25	4.00@ 7.00
Feeder lambs	.....	12.00@13.25	11.50@13.40

Valley View Farms Poland Chinas
AT PUBLIC AUCTION
Oberlin, Kansas, Saturday, January 27, 1923
40 Head *Bred Sows and Big Spring Gilts*
Also some Choice Fall Pigs

A carefully selected offering of real herd-building material sired by the 1,040-pound grand champion Giant Bob Wonder, Liberty Bond, Jumbo Joe, Giant Guardsman, Bobs Superior, Longfellow, King Royal and other noted boars. The sows and gilts are bred to Giant Bob Wonder and The Field Marshall for seasonable farrow. We believe you will find here the greatest variety of breeding of any sale this far West. All immuned, growthy and in splendid condition. If you want more size, more pigs per litter, more feeding quality, plan to attend this sale. Write now for catalog.

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BLUE RIBBON HERD
DUROCS

Buy them young and grow them yourself. Weaned pigs, regular price $25 to $50. Our specialty for short time on good farmers' boars, weaners, $15 and $20. Show prospects, weaners, $50. Are breeding now for fall farrow. Can sell you one or a carload. Our Blue Ribbon herd was the high winner at Denver. Write today.

The Blue Ribbon Live Stock Co.
C. F. Burke, Mgr. PUEBLO, COLO.

We Have Moved
Come and See Us in Our New Home Near Denver.

We have just completed two more state records—one senior 2-year-old 305-day division, 17,000 lbs. milk, 670 lbs. butter. The other a senior 2-year-old with 17,050 lbs. milk, 850 lbs. butter, 365-day division.

We are offering two extra nice young bulls for sale from high record cows.

MRS. R. G. DOUGLAS,
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Milking Shorthorns
THE MONEY MAKERS FOR THE FARMER.

You cannot go wrong by developing your herd into a dual-purpose paying proposition. This can be done at a small cost by securing one of our young bulls by Master Sam. Master Sam was first at the Irish Royal in dairy class, second in beef class. His dam, Maiden Fern, gave 12,330 pounds milk in 37 weeks. Maiden Fern has never been defeated in the show ring. See samples of Master Sam breeding at the National Western, Denver, Jan. 13 to 20. Ask us about young bulls. We have them priced to sell.

The Pine Valley Dairy & Farms Co.
Seeley G. Rose, Mgr. Colorado Springs, Colo.

PRODUCTION
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We offer you a wonderful amount of these Holstein qualities—and from a clean herd. Bull calves from fine record dams. Pahgre Valley Ranch, Loesch Bros., Montrose, Colo.
SIZE
BREEDING

Buy a Calf Out of This Herd

Twenty cows in this herd on an official seven-day test averaged 446.13 lbs. of milk and 20.19 lbs. of butter.

COLORADO STATE HOME,
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Milking Shorthorn Grades Heifers and Young Cows

Reds and roans. Heavy in calf, and Springers. Especially selected from good herds. One or a carload, priced reasonably, quality considered.

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Bates Shorthorns

are the foundation blood of true Milking Shorthorns. We have them. A few bulls for sale.

THE CARPENTER CATTLE CO.
GREELEY, COLORADO

Buy MILKING SHORTHORNS

from the oldest established herd in the state. We can supply your needs in bulls of beef type either horned or polled Shorthorns. Write Superintendent for folder on breeding and prices.

State Industrial School,
Golden, Colo.

Milking Shorthorns
All Cows in Milk Officially Tested.

Service bulls of World's Record breeding. Both males and females for sale. Personal inspection invited. Send for Illustrated Booklet.

THE BONVUE FARMS CO.,
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We have bred hundreds of prize-winning and high-producing Holstein cows, including

Tilly Alcartra

We can supply you with that same line of breeding. Write

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GREAT BARGAINS, 960 HEAD HEREFORDS, SHORTHORNS, ABERDEEN ANGUS
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LINE BRED SENSATION DUROCS
SPRING BOARS

A few real herd-headers left. Priced right for quick sale. Guaranteed breeders. Innoculated and cholera immune. Write for prices and particulars.

WINDERMERE FARM,
Lawrence Collins, Manager.
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Brauer Purebred Duroc Co.
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The greatest individual lot of spring boars at moderate prices, to close out early. Now is your time to buy.

Write for full particulars, etc.
J. W. BRAUER, Gen. Mgr.
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We make a specialty of furnishing foundation herds. Show and Herd Boar prospects that combine the blood of the greatest show hogs ever produced. Lookouts, Wickwares and Tiptons. For free booklet etc., write N. E. MOSHER & SON, Hugo, Colo.

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Just a few real herd headers left ready to go at pre-war prices. Used with grade sows even, they will more than pay for themselves on the first crop of pigs. Write today.

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Western Farm Life Gets the Business.

"That little ad got me just $127.50 worth of business, and I guess that's going some." —R. H. Jandebeur, Alma, Kans.

P. S.—I wish to say that your paper is the best business getter I have ever used. The little classified ads sure get the business. Thanks to Western Farm Life. A. H. J.

The fats they need
—now easy to digest

What this digestible shortening means to thoughtful mothers:

THAT "hollow-legged" son of yours! That gentle, shy little daughter! What a glad responsibility is their rearing! We know, for example, that buoyant health in middle life often depends on childhood food—on mother's loving supervision of the kitchen.

Dr. Robert Hutchison (the English authority) says that your 14-year-old boy needs practically as much food as a grown-up man. But he stresses the need for special digestibility in the child's foods.

What Official Investigations show

Many official investigators interested primarily in the health of our American children have made this discovery:

Hundreds of thousands of children from prosperous homes are under-nourished.

Important among the several causes is a need for more easily digested foods.

So, nowadays, well-informed mothers appreciate the importance of digestibility in family foods.

Knowing that fats produce a full third of the body energy of both children and grown-ups, these mothers naturally aim to use a *digestible* shortening. In homes where the mother herself keeps a watchful eye on the family health you will find that Crisco is displacing less digestible fats.

These mothers prefer—because of its digestibility—this *vegetable* shortening, Crisco.

Crisp, easily digested fried foods! Wholesome, delicious cakes, pies and cookies. What a real comfort to bake and to fry with Crisco—free from anxious doubts about the digestibility of the foods you serve. With Crisco you may take a motherly satisfaction in giving your children the foods they love—in digestible form.

Common sense tells mothers that so healthful a shortening as Crisco must cost, in a week's cooking, a few cents more than do fats of questionable digestibility. They would no more deliberately use a cheap, unwholesome shortening than they would deliberately buy inferior milk.

Up-to-date grocers everywhere take a real pleasure in selling this healthful food ingredient—Crisco.

Send for this exceptional cook book

Entitled "A Calendar of Dinners"; it gives 365 complete dinner menus—one for every day in the year; also 615 exclusive recipes, together with new and helpful cooking suggestions. Gladly sent to friends of Crisco for 25c—considerably less than the cost of publication. Mail stamps or coin to Section U-12, Dept. of Home Economics, The Procter & Gamble Co., Cincinnati, O.

Two simple home tests

Low Melting Point. Easy Digestibility.

Into half a glass of lukewarm water drop a small lump each of Crisco and any other shortening. With a teaspoon gradually add hot water until Crisco melts. You will find that few other fats melt at this point. Physicians say that an easily digested fat should melt near body heat—98½ degrees. Crisco, you will find, melts even below this temperature. It melts at 97 degrees. (This test does not necessarily condemn the digestibility of the other fat tested, but will aid you to establish Crisco's fine digestibility.)

Avoid Smoke and Odor!

Put into separate pans equal amounts of Crisco and any other fat. Heat slowly for eight minutes, or until they reach a temperature where a bread crumb browns in 40 seconds.

Notice that the Crisco, unlike most cooking fats, does not smoke at this proper frying temperature.

You will find that frying with Crisco will be very helpful in keeping your whole home fresh and free from the odor of cooking fats.

For delicious, digestible cakes
For digestible and flaky pastry
For crisp, digestible fried foods

Digestible Vegetable Shortening

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